

**VIA FEDERAL EXPRESS**



September 1, 2015

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Attn: Mr. Gary Beyer  
Mr. Bill Shafford

Subject: Supplement to Affected Property Assessment Report  
Exide Technologies Frisco Recycling Center; Frisco, Texas  
TCEQ Agreed Order Docket No. 2011-1712-IHW-E; IHW Permit No.  
HW-50206; TCEQ SWR No. 30516; Customer No. CN600129779;  
Regulated Entity No. RN100218643; EPA ID No. TXD006451090;  
EPA Administrative Order on Consent RCRA 06-2012-0966

Dear Mr. Hyde, and Ms. Singhvi,

Exide Technologies ("Exide") has completed additional actions at the Frisco Recycling Center in Frisco, Texas to comply with the ordering provisions of TCEQ Agreed Order Docket No. 2011-1712-IHW-E, and the EPA Order on Consent RCRA 06-2012-0966. Specifically, Exide has completed the supplemental sampling requested by the TCEQ in TCEQ's comments dated May 5, 2015 regarding the Affected Property

Richard A. Hyde, P.E.  
Sunita Singhvi, Chief  
Order Compliance Team  
September 1, 2015

Page 2 of 2

Assessment Report for the Former Operating Plant Parcel (APAR), as responded to in Exide's response to those comments dated July 2, 2015. The TCEQ approved Exide's response to comments on July 30, 2015. Enclosed is a Supplement to the APAR presenting the results of supplemental sampling performed.

Sincerely,

**EXIDE TECHNOLOGIES**



Matthew A. Love  
Director, Global Environmental Remediation

Enclosure

cc: Mr. Gary Beyer – TCEQ – 5 copies  
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Ms. Melissa Smith – EPA  
Mr. Mack Borchardt – City of Frisco  
Ms. Aileen Hooks – Baker Botts  
Waste Section Manager, Dallas/Fort Worth Regional Office, TCEQ  
Mr. Eric Pastor – Pastor Behling & Wheeler

Texas Commission on Environmental Quality

# Remediation Division Correspondence Identification Form

SITE & PROGRAM AREA IDENTIFICATION					
SITE LOCATION			REMEDIATION DIVISION PROGRAM AND FACILITY IDENTIFICATION		
Site Name: <b>Frisco Recycling Center, Former Operating Plant</b>			Is This Site Being Managed Under A State Lead Contract? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Address 1: <b>7471 South 5th Street</b>			Program Area: <b>IHW CORRECTIVE ACTION</b>		
Address 2:			Mail Code: <b>MC-127</b>		
City: <b>Frisco</b>		State: <b>Texas</b>	Is This A New Site To This Program Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Zip Code: <b>75034</b>	County: <b>Collin</b>	TCEQ Facility ID No.:		<b>30516</b>	
TCEQ Region: <b>Region 4 - Dallas/Fort Worth</b>		--Leave This Field Blank--		--Leave This Field Blank--	

DOCUMENT(S) IDENTIFICATION	
PHASE OF REMEDIATION	DOCUMENT NAME
1. <b>ASSESSMENT</b>	<b>AFFECTED PROPERTY ASSESSMENT REPORT (APAR)</b>
2.	
3.	
4.	
5.	

CONTACT INFORMATION					
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TCEQ INTERNAL USE ONLY			
Document No.	TCEQ Database Term	Document No.	TCEQ Database Term
1.	<b>APAR</b>	4.	
2.		5.	
3.			

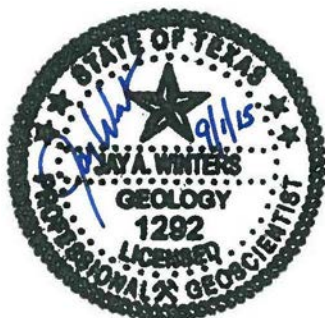


# SUPPLEMENT TO THE AFFECTED PROPERTY ASSESSMENT REPORT (APAR)

**Exide Frisco Recycling Facility**  
**7471 South 5<sup>th</sup> Street, Frisco, Texas 75034-5047**  
**TCEQ SWR No. 30516**  
**TCEQ Hazardous Waste Permit No. HW-50206**  
**TCEQ Agreed Order Docket No. 2011-1712-IHW-E**  
**EPA Administrative Order on Consent RCRA 06-2012-0966**  
**Customer No. CN600129779**  
**Regulated Entity No. RN100218643**

**Submitted To:** Exide Technologies  
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**Submitted By:** Golder Associates Inc.  
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**September 1, 2015**

**1302086**





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## EXECUTIVE SUMMARY

The Exide Technologies (Exide) Frisco Recycling Center (FRC) is a former oxide manufacturing, battery recycling and secondary lead smelting facility located at 7471 South 5<sup>th</sup> Street in Frisco, Collin County, Texas. The FRC encompasses approximately 257 acres consisting of the 87-acre Former Operating Plant (FOP) and the surrounding 170-acre Undeveloped Buffer Property. This Supplement to the May 22, 2014 Affected Property Assessment Report (2014 APAR) presents the results of the most recent assessment activities conducted at the FOP (the Site), which includes the FRC's former operational areas, two closed pre-RCRA landfills (North Disposal Area and South Disposal Area), one closed Class 2 landfill (the Slag Landfill), one active Class 2 landfill, and other ancillary facilities.

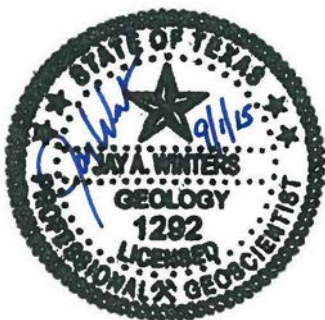
Golder Associates Inc. (Golder) has prepared this Supplement to the 2014 APAR at the request of the Texas Commission on Environmental Quality (TCEQ) per comments issued by the TCEQ on May 5, 2015 regarding the 2014 APAR (May 5, 2015 Comments). As part of a response Exide issued on July 2, 2015 to the May 5, 2015 Comments, Exide agreed to further assess specific areas of the FOP. The areas in which additional assessment would be performed were based on specific data requests from TCEQ (per the May 5, 2015 Comments) and through the re-evaluation of existing Site data to identify data gaps. On July 30, 2015, the TCEQ approved the response to comments issued by Exide on July 2, 2015 (which specified the scope of supplemental assessment presented in this supplement).

Additional Site assessment was done in accordance with the assessment methods discussed in the 2014 APAR. A brief discussion of the field program and procedures is included in this supplement with references to previously documented information, where appropriate. Additional Site assessment was limited to soil sampling and analytical testing.

Exide completed two additional rounds of sampling/testing at the Site following the receipt of the May 5, 2015 Comments, and many of the data gaps identified therein have been resolved. 86 additional soil samples were collected and analyzed to supplement the data included in the 2014 APAR. Only a few areas remain that have not been fully delineated laterally and vertically within the TCEQ-required timeframe for submission of this supplement.

As was the case at the time of submission of the 2014 APAR, Exide agrees with TCEQ that although it is acknowledged that delineation is not 100% complete in all areas of the Site for all metals, based on the amount of information collected for the Site to date, there is sufficient data to prepare a Remedial Action Plan (RAP) for the Site (TCEQ, 2015). The few remaining areas where data gaps exist can be addressed when remedial actions are implemented (through excavation confirmation samples or as part of a Preliminary Design Investigation) or when specific features at the Site are decontaminated and demolished (such as the Crystallization Unit and Solar Evaporation Pond).

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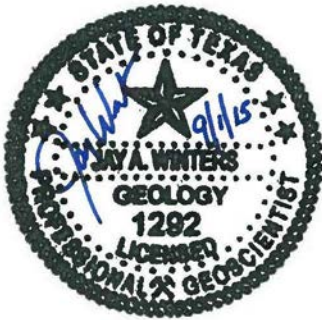
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## 1.0 INTRODUCTION

The Exide Technologies (Exide) Frisco Recycling Center (FRC) is a former oxide manufacturing, battery recycling and secondary lead smelting facility located at 7471 South 5<sup>th</sup> Street in Frisco, Collin County, Texas. The FRC encompasses approximately 257 acres consisting of the 87-acre Former Operating Plant (FOP) and the surrounding 170-acre Undeveloped Buffer Property. This Supplement to the May 22, 2014 Affected Property Assessment Report (2014 APAR) presents the results of assessment activities conducted at the FOP (the Site), which includes the FRC's former operational areas, two closed pre-RCRA landfills (North Disposal Area and South Disposal Area), one closed Class 2 landfill (the Slag Landfill), one active Class 2 landfill, and other ancillary facilities.

Golder Associates Inc. (Golder) has prepared this Supplement to the 2014 APAR at the request of the Texas Commission on Environmental Quality (TCEQ) per comments issued by the TCEQ on May 5, 2015 regarding the 2014 APAR (May 5, 2015 Comments). As part of a response Exide issued on July 2, 2015 to the May 5, 2015 Comments, Exide agreed to further assess specific areas of the FOP. The areas in which additional assessment would be performed were based on specific data requests from TCEQ (per the May 5<sup>th</sup> Comments) as well as through the re-evaluation of existing Site data to identify data gaps. On July 30, 2015, the TCEQ approved the response to comments issued by Exide on July 2, 2015 (which specified the scope of supplemental assessment presented in this supplement).

Additional Site assessment work was done in accordance with the assessment methods discussed in the 2014 APAR. A brief discussion of the field program and procedures is included in this supplement with references to previously documented information, where appropriate. Additional Site assessment work was limited to soil sampling and analytical testing.

This Supplement to the 2014 APAR includes an overview of the additional Site assessment performed for each affected property as well as an updated description of the affected property, where appropriate. The affected properties for which additional assessment were performed included the following:

- Affected Property No. 1 (North Area)
- Affected Property No. 2 (Production Area)
- Affected Property No. 3 (South Area)
- Affected Property No. 4 (Crystallizer Way)
- Affected Property No. 5 (West and Southwest of Class 2 Landfill)
- Possible Affected Property No. 9 (South Lake Parcel)
- Possible Affected Property No. 10 (Entrance Driveway to Crystallization Unit)

In addition, additional assessment was done on the central and northern portions of the Lake Parcel. This area is not considered an affected property, but was delineated for lead to 250 milligrams per kilogram (mg/kg) at the request of the City of Frisco.

Boring logs for the additional sample locations completed for this supplement, are included in Appendix A, sample coordinates are included in Appendix B, and laboratory analytical results and data usability summaries (discussed in Section 2.5) are included in Appendix C.

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## 2.0 ASSESSMENT METHODS

The additional field and laboratory investigation activities described herein were performed in June and July 2015 (supplement to the APAR investigations) with the exception of two samples collected in May 2014 for which data was not received in time to include in the 2014 APAR (2014-SCC-16 and 2014-CUFT-19). 86 additional soil samples were collected to supplement the data included in the 2014 APAR. The field and laboratory activities were implemented in conformance with Texas Risk Reduction Program (TRRP) requirements and with the methods and procedures described in the 2014 APAR. A description of the sample locations and analyses is provided below. In addition, Golder requested that the analytical lab report additional metals where possible for some previously reported samples (10 samples total) where additional data might aid in delineating specific metals. Data Usability Summaries (DUS) were prepared for new lab reports and DUS were updated for revised lab reports.

### 2.1 Sample Locations

In order to select sample locations for the June and July 2015 sampling programs, Golder reviewed existing data collected to date to evaluate where additional assessment was warranted and also considered TCEQ comments that requested additional data in specific locations. The review of existing data and identification of sample locations was performed by taking a comprehensive look at each of the affected properties and identifying areas where additional assessment was needed to complete delineation. This approach (and corresponding discussion below) differs from the previous discussions that were presented based on a process area-specific basis or a waste management units (WMU) specific basis. Although the individual process area/WMU discussion was more appropriate in earlier phases of investigation when the specific sources areas at the Site were being assessed, continuing the discussion on an affected property basis is more appropriate at the current state of investigation as the Site is moving toward developing a remedial action plan (RAP) to address each of the affected properties.

#### 2.1.1 Affected Property No. 1 (North Area)

Nine samples were collected to perform additional assessment and delineation in affected property No. 1, specifically including arsenic, and to address TCEQ Comment 14 in the May 5, 2015 Comments requesting additional assessment in the vicinity of E-11C. Sample locations included the following:

- D-11C (0.5-2 feet below ground surface [ft bgs]) and (2-4 ft bgs)
- D-11D (0-0.5 ft bgs)
- D-11E (0-0.5 ft bgs)
- D-11F (0-0.5 ft bgs)
- E-11C-B (2-4 ft bgs) (Vertical delineation at E-11C)
- E-11C-C (0-0.5 ft bgs)
- E-11C-D (0-0.5 ft bgs)



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■ E-15B (0-0.5 ft bgs)

All samples were analyzed for arsenic and some samples were also analyzed for lead. In addition, Golder requested that the previous lab reports for five samples collected in 2014 be revised to add additional metals to the previously reported results (D-13A [0-0.5 ft bgs], E-13A [0-0.5 ft bgs], E-14A [0-0.5 ft bgs], 2013-NT-02 [0-0.5 ft bgs] and E-11C-A [0.5-2 ft bgs]).

### **2.1.2 Affected Property No. 2 (Production Area)**

Twenty seven samples were collected within Affected Property No. 2 to perform additional delineation and assessment of the affected property, and to specifically address various TCEQ Comments in the May 5, 2015 Comments as follows:

- Samples to perform additional delineation for antimony, arsenic and lead as needed based on review of existing data (delineation around MW-17B)
  - 2015-MW-17C (0-0.5 ft bgs) analyzed for antimony, arsenic and lead
  - 2015-MW-17D (0.5-2 ft bgs), (2-4 ft bgs) analyzed for antimony, arsenic and lead
- Samples to address TCEQ Comment 9 requesting additional benzene delineation in the vicinity of 2013-STB-6 (all samples analyzed for benzene):
  - 2015-STB-6A (1-2 ft bgs), (4-6 ft bgs) and (6-8 ft bgs)
  - 2015-STB-6B (1-2 ft bgs)
  - 2015-STB-6C (0.75-2 ft bgs)
- Samples to address TCEQ Comment 11 in the May 5, 2015 Comments requesting soil sampling in the previous locations of 2012-FWCS-5, 6 and 7 (all samples analyzed for antimony, arsenic, cadmium, lead, and zinc):
  - 2015-FWCS-5A (0-0.5 ft bgs)
  - 2015-FWCS-6A (0-0.5 ft bgs)
  - 2015-FWCS-7A (0-0.5 ft bgs)
- Samples to address TCEQ Comment 12 in the May 5, 2015 Comments and based on additional discussion with TCEQ requesting additional assessment between 2012-NDA-4 and 2012-NDA-6 and in the area surrounding ECO-11 (all samples analyzed for lead with some samples also analyzed for arsenic):
  - 2015-NDA-11 (0-0.5 ft bgs)
  - 2015-NDA-12 (0-0.5 ft bgs)
  - 2015-NDA-13 (0-0.5 ft bgs)
  - 2015-FFTA-08A (0-0.5 ft bgs)
  - ECO-11A (0-0.5 ft bgs)
  - ECO-11B (0-0.5 ft bgs)
  - ECO-11C (0-0.5 ft bgs) and (0.5-2 ft bgs)
  - ECO-11D (0-0.5 ft bgs)

- ECO-13 (0-0.5 ft bgs)
- ECO-14 (0-0.5 ft bgs)
- ECO-15 (0-0.5 ft bgs)
- ECO-16 (0-0.5 ft bgs)
- ECO-17 (0-0.5 ft bgs)
- ECO-18 (0-0.5 ft bgs)
- ECO-19 (0-0.5 ft bgs)

In addition, Golder requested that the previous lab reports for one sample collected in 2014 be revised to add arsenic to the previously reported results (MW-27B [2-4 ft bgs]).

Additional samples for vertical delineation were also planned at the original locations of 2013-STB-6 and FWFS-5B to address TCEQ Comments 9 and 10 in the May 5, 2015 Comments, respectively, but these two locations were not accessible during the June or July sampling events due to frac tanks staged in the area to respond to the flooding issues at the Site. Additional assessment at these locations will be conducted when access is available.

### **2.1.3 Affected Property No. 3 (South Area)**

13 samples were collected in the South Area to perform additional delineation and assessment of the area, and to specifically address various TCEQ Comments in the May 5, 2015 Comments as follows:

- Samples to perform additional delineation for antimony, arsenic and lead as needed based on review of existing data (delineation around ECO-5)
  - ECO-5-A (0-0.5 ft bgs) analyzed for antimony and arsenic (at location of ECO-5 where antimony and arsenic were not previously analyzed)
  - ECO-8C (0-0.5 ft bgs) analyzed for antimony, arsenic and lead (delineation for arsenic and lead at ECO-8B and general assessment of antimony in South Area)
  - ECO-8D (0-0.5 ft bgs) analyzed for antimony, arsenic and lead (delineation for arsenic and lead at ECO-8B and general assessment of antimony in South Area)
  - 2015-SDA-3C (0-0.5 ft bgs) analyzed for antimony, arsenic and lead (delineation of lead at 2013-SDA-3B and general assessment of antimony and arsenic in South Area)
  - SCC-5C (0-0.5 ft bgs), (0.5-2 ft bgs) analyzed for antimony and lead (vertical delineation of lead and antimony at SCC-5B)
  - SCC-5D (2-4 ft bgs) (Vertical delineation at SCC-5C) analyzed for antimony, arsenic, lead and other metals
- Samples to address TCEQ Comment 2 requesting additional information for antimony in the shooting range/south berm (samples analyzed for antimony and arsenic):
  - SRB-VS-3A (0-0.5 ft bgs)
  - SRB-VS-7A (0-0.5 ft bgs)

- Samples to address TCEQ Comment 15 requesting additional delineation in the South Disposal Area (all samples analyzed for arsenic and lead with one sample analyzed for additional metals)
  - B3RA-A (0-0.5 ft bgs)
  - B3RA-B (0-0.5 ft bgs)
  - B3RA-C (0-0.5 ft bgs)
  - B3RA-D (0-0.5 ft bgs)

In addition, Golder requested that the previous lab reports for four samples collected in 2014 be revised to add additional metals to the previously reported results (SCC-5A [0-0.5 ft bgs], ECO-10A [0-0.5 ft bgs], ECO-4B [0-0.5 ft bgs], and SRB-VS-9E [0-0.5 ft bgs]).

#### **2.1.4 Affected Property No. 4 (Crystallizer Way)**

Six samples were collected along Crystallizer Way to perform additional assessment and delineation of lead in Affected Property No. 4, and to specifically address TCEQ Comment 16 in the May 5, 2015 Comments requesting additional assessment at 2014-CUFT-16 (originally identified as 2014-SDA-16 in the TCEQ comments) as follows:

- 2015-CUFT-15A (0-0.5 ft bgs)
- 2015-CUFT-16A (0-0.5 ft bgs)
- 2015-CUFT-16B (0-0.5 ft bgs), (0.5-2 ft bgs)
- 2015-CUFT-16C (2-4 ft bgs), (4-6 ft bgs) (Vertical delineation at 2015-CUFT-16)
- 2015-CUFT-16D (0-0.5 ft bgs)

All samples were analyzed for lead and one sample was analyzed for additional metals.

#### **2.1.5 Affected Property No. 5 (West and Southwest of Class 2 Landfill)**

During the 2015 supplement to the APAR investigation, eight additional borings were installed and samples were taken to further delineate areas to the southwest, east and west of the Class 2 Landfill for arsenic, antimony, lead, and selenium, as appropriate, and to specifically address TCEQ Comment 13 in the May 5, 2015 Comments requesting a sample be collected to the west of 2014-CL2-06A:

- 2015-C2L-06D (0-0.5 ft bgs)
- 2015-C2L-06E (0-0.5 ft bgs)
- 2015-C2L-06F (0-0.5 ft bgs)
- 2015-C2L-06G (0-0.5 ft bgs)
- 2015-C2L-06H (0.5-1 ft bgs)
- 2015-C2L-06J (0-0.5 ft bgs)
- 2015-C2L-06K (0-0.5 ft bgs)

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- 2015-C2L-C01D (0-0.5 ft bgs)

Samples were analyzed for antimony, arsenic, lead and/or selenium, as appropriate. At the 2015-C2L-06H location, the shallowest interval (0-0.5 ft bgs) was primarily imported gravel, so no soil sample could be collected and a deeper sample (0.5-1 ft bgs) was collected instead.

### **2.1.6 Former Possible Affected Property No. 9 (South Lake Parcel)**

Possible Affected Property No. 9 was defined in the 2014 APAR by a single XRF sample collected on the southern portion of the Lake Parcel near Crystallizer Road Way during the 2013 W&M Interim Actions (W&M, 2013). A confirmation sample (2014-CUFT-19) was collected in this location and analyzed for lead in May 2014 (but not in time to include in the 2014 APAR). The result for 2014-CUFT-19 was below the RAL for lead and also below 250 mg/kg. This possible affected property was eliminated from further consideration.

### **2.1.7 Possible Affected Property No. 10 (New Affected Property No. 9, (Entrance Driveway to Crystallization Unit))**

Possible Affected Property No. 10 was defined in the 2014 APAR by a single XRF sample collected south of Stewart Creek near the entrance driveway to the Crystallization Unit during the 2013 W&M Interim Actions (W&M, 2013). A confirmation sample (2014-SCC-16) was collected in this location and analyzed for lead in May 2014 (but not in time to include in the 2014 APAR). The result for 2014-SCC-16 (358 mg/kg) exceeded the RAL for lead (274.5 mg/kg). This possible affected property is now designated Affected Property No.9. Eight additional borings were installed in 2015 in order to further characterize the affected property:

- 2015-SCC-16A (0-0.5 ft bgs)
- 2015-SCC-16B (0-0.5 ft bgs), (0.5-2 ft bgs)
- 2015-SCC-16C (0-0.5 ft bgs)
- 2015-SCC-16D (0.5-2 ft bgs) (Vertical delineation at original location of 2014-SCC-16)
- 2015-SCC-16E (0-0.5 ft bgs)
- 2015-SCC-16F (0-0.5 ft bgs)
- 2015-SCC-16G (0-0.5 ft bgs)

Samples collected from these borings were all analyzed for lead with three samples also analyzed for other metals.

### **2.1.8 Additional Lake Parcel Assessment**

In addition to the areas above, thirteen borings were completed on the Lake Parcel to delineate lead previously detected between 250 mg/kg and the RAL (274.5 mg/kg) at locations F-4, G-5 and G-6:

- F-4A (0-0.5 ft bgs)
- F-4B (0-0.5 ft bgs)
- F-4C (0-0.5 ft bgs)
- F-4D (0-0.5 ft bgs)
- F-4E (0.5-2 ft bgs) (Vertical delineation at original location of F-4)
- G-5A (0-0.5 ft bgs)
- G-5B (0-0.5 ft bgs)
- G-5C (0-0.5 ft bgs)
- G-5D (0-0.5 ft bgs)
- G-6A (0-0.5 ft bgs)
- G-6B (0-0.5 ft bgs)
- G-6C (0-0.5 ft bgs)
- G-6D (0.5-2 ft bgs) (Vertical delineation at original location of G-6)

This area is not considered an affected property but was delineated to 250 mg/kg at the request of the City of Frisco. All samples were analyzed for lead and other metals.

## 2.2 Field Procedures

Soil samples were collected using several methods, including a Geoprobe drilling rig with direct push technology (DPT) outfitted with 4-foot or 5-foot core barrel lined with a cellulose acetate butyrate (CAB) disposable liner or hand tools (i.e., hand augers and disposable trowels). Samples were lithologically logged and classified based on the Unified Soil Classification System (USCS). Boring logs are included in Appendix A. Photoionization Detector (PID) readings were collected within certain process areas, where applicable (where samples were planned to be analyzed for benzene). PIDs were calibrated daily in accordance with the manufacturer's specifications. Following completion of sampling activities, boreholes were plugged with hydrated bentonite pellets. Non-disposable equipment contacting sampled material was decontaminated prior to use and between each sample location, and equipment blanks were collected to verify that decontamination procedures were adequate.

Sample locations were typically located in the field with a Trimble global positioning system (GPS) with real-time differential correction capabilities, or were pre-loaded onto the GPS unit and marked in the field prior to sampling. Coordinates for 2015 sample locations are provided in Appendix B.

Multiple soil samples were typically collected at various depth intervals from borings completed at the Site and were analyzed, as necessary, to assess/delineate affected property areas at the Site. Samples were placed in containers supplied by Test America, sealed, labeled, and placed on ice in an insulated ice

chest for delivery to Test America's Houston, Texas laboratory. Appropriate chain of custody documentation, blanks, and seals accompanied the samples in accordance with TRRP requirements.

## 2.3 Laboratory Analytical Program

The analytical program consisted of the following methodologies:

- Select metals by EPA SW-846 Method 6010; and
- Benzene by EPA SW-846 Method 8260.

Laboratory analyses were performed by Test America's Houston, Texas laboratory (consistent with the 2014 APAR). Laboratory analytical results are included in Appendix C.

## 2.4 Investigation-Derived Waste

Soil investigation-derived waste (IDW) is currently being stored in 55-gallon steel drums at the Site pending disposition. Following the receipt of waste characterization results, the IDW will be shipped off-Site in accordance with state and federal regulations.

## 2.5 Data Quality

The laboratory analytical methods used for the analysis of the COCs outlined above were appropriate EPA SW-846 methodologies. Sample quantitation limits (SQLs) for all analytes were below applicable PCLs for all media evaluated. Field duplicate sample data for soil are included in Tables 1 and 2. Laboratory quality assurance/quality control (QA/QC) data and blank data (trip blanks and equipment blanks) are discussed in the DUS and validation reports in Appendix C. A summary of the data validation procedures for the 2015 investigation for this supplement to the APAR investigation is provided below.

Data collected for the 2015 supplement to the affected property assessment were validated in accordance with TRRP requirements. A review was completed on 100% of the environmental samples to determine conformance with the requirements of the TRRP guidance document, *Review and Reporting of COC Concentration Data* (RGG-366/TRRP-13) (TCEQ, 2010b) and for adherence to project objectives. Results of the review are presented in DUS by sample media (Appendix C).

Criteria used for the data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data are rejected) and  $\pm$ ML difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13.
- Organics: 60-140% spike recovery (and not less than 10% or data are rejected) and  $\pm$ ML difference or 40% RPD (for laboratory duplicates) as recommended in TRRP-13.
- Soil Samples:  $\pm$  3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.



If an item was found outside of the review criteria, the reviewer applied a data qualifier and bias code to the results for the affected samples in accordance with TRRP-13. Per TRRP-13, the qualifiers and codes are defined as follows:

- U - Not detected; the analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).
- UJ - Estimated data; the analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.
- J - Estimated data; the analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.
- NJ - Tentatively identified, estimated data; the analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
- NS - Not selected; another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.
- R - Rejected data; the result is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.
- X7 - The laboratory is not NELAC accredited under the Texas Laboratory Accreditation Program for this analyte in this matrix analyzed by this method. The TCEQ does not offer accreditation for this analyte, in this matrix, analyzed by this method.
- X8 - The laboratory is not NELAC accredited under the Texas Laboratory Accreditation Program for this analyte in this matrix analyzed by this method. The TCEQ offers accreditation for this analyte in this matrix by this method, but the laboratory is not accredited for this analyte in this matrix by this method. The analyte result is validated and reported as part of a suite of analytes for the method.
- H - Bias in sample result is likely to be high.
- L - Bias in sample result is likely to be low.

When an option exists to assign two different flags, the flag higher in the data quality hierarchy was assigned (R > U > NJ > J > JL/JH for detects and R > UJ > UJL for non-detects).

All analytical results presented in the tables and figures of this report include the data qualifier, if any was applied. Appendix C lists all of the qualified results with the specific reasons for qualification.

Results with no qualification and those qualified as estimated are of acceptable quality for the intended use. Some results are qualified as estimated (J, JH, JL, UJ or UJL) due to minor QC issues, primarily poor matrix spike recoveries or poor duplicate precision. This is not considered unusual due to the inherent variability of soil samples. Note that a data qualifier of J may be assigned solely because the analytical result was qualified by the laboratory as an estimated concentration between the sample

detection limit and the quantitation limit. The concentration reported for detects or the reporting limit for non-detects is considered estimated with a high bias (JH flag), low bias (JL or UJL flag), or unknown bias (J or UJ flag).

Results that are qualified as not detected because the result is associated with a contaminated blank (U) are also useable. No samples included in this supplement were qualified because of blank detections.

Results that are rejected (R) are not useable. No samples included in this supplement were listed as rejected.

As recommended in TRRP-13, non-detect inorganic results are not unusable when MS/MSD recoveries are lower than 30%. No samples included in this supplement were determined to be unusable.

A number of other samples were affected by MS/MSD recoveries for antimony that were marginally lower than 30%. Low antimony recoveries have been well documented as an issue with the preparation and analytical method in some soils. The laboratory control samples (or laboratory fortified blanks) were in control, indicating the analysis and sample preparation were in control with respect to antimony. Although a low bias was identified, the data required only 'J' or 'UJ' flagging and are still considered usable results.

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### 3.0 SOIL ASSESSMENT AND AFFECTED PROPERTY DESCRIPTION

#### 3.1 Derivation of Assessment Levels

Assessment levels for this Supplement to the 2014 APAR are the same as those referenced in the 2014 APAR. The assessment levels are listed in Tables 1 through 3 for reference purposes.

#### 3.2 Affected Property Descriptions

Based on the data collected in the Site Investigation Report (SIR) and APAR investigations as well as data collected in 2015 for this Supplement to the APAR, nine affected property areas were identified at the Site, each of which has been delineated except where noted. A more detailed discussion of the extensive data collected to date at the Site is included in the 2014 APAR. Historical sample data from previous investigations conducted at the Site, including data from the Phase I and Phase II RCRA Facility Investigations (RFIs), were reviewed and were used to develop sampling strategies; however, these data were not used to delineate affected property boundaries at the Site.

SIR and APAR sample data, as well as historical data from the Site, indicate that soil and sediment are the primary affected media at the Site. The majority of groundwater and surface water sample data collected during the SIR and APAR investigations were below applicable residential assessment levels (RALs) and RBELs. No affected property areas were identified for these media. As discussed above, only soil data was collected in 2015 and was used to update the affected property descriptions. Details for other media are included in the 2014 APAR.

A brief description of each of the affected property areas based on RAL exceedances is included below.

##### 3.2.1 Affected Property No. 1 (North Area)

Affected Property No. 1 (North Area) is located north of the North Tributary and south of the Class 2 Landfill. Exceedances of the soil RAL for lead and arsenic were detected in several soil samples from this area.

The maximum soil sample concentration of lead detected in this area was 11,200 mg/kg in sample E-11C (0-0.5'). The RALs for arsenic, cadmium, selenium, and antimony were also exceeded at this point. There were no other exceedances of antimony, cadmium or selenium in this affected property. The samples collected from the 0.5-2 ft bgs interval in this location (E-11C-A, analyzed for all five metals) did not have exceedances of RALs and the sample collected from 2-4 ft bgs interval (E-11C-B, analyzed for arsenic and lead) did not have exceedances of background values for lead and arsenic. Areas north, south and east of this location are included within the affected property. This boring location is delineated to the west by location E-11B on the J-Parcel (analyzed for arsenic, cadmium and lead).

The remainder of the affected property was laterally delineated for lead and arsenic within the FOP site boundary by soil samples collected to the east, north, and west of the affected property, and by sediment samples collected from the North Tributary to the south that were below the applicable assessment levels for sediment and soil for lead and cadmium. The affected property is also bounded farther to the west on the Undeveloped Buffer Property, which is being addressed separately (PBW, 2014). Lateral delineation is complete with the exception of the following:

- The area northeast of P-1 where the PCLE zone extends to the property boundary and utilities prevented additional borings in this area. The area to the east of 5<sup>th</sup> Street/Parkwood Drive is within the PCLE Zone for the Undeveloped Buffer Property (PBW, 2014).
- The affected property boundary is assumed to extend to the edge of the North Tributary, south of sample locations 2013-NT-01 and 2013-NT-02, where the southern extent of the affected property was not delineated by soil samples collected between the affected property and the North Tributary (i.e., where sediment samples were used to delineate the affected property).
- Exceedances at the property boundary were observed at E-11C-D (for arsenic) and E-11C-C (for lead). Areas farther west are within the J-Parcel PCLE zone and are being addressed separately.
- The area north of D-14 and D-15, where data has not yet been collected to assess arsenic but there were no exceedances for lead. Additional sampling will be completed in this area as part of a Preliminary Design Investigation (PDI) or during excavation confirmation sampling.

As discussed above, Affected Property No. 1 was vertically delineated to below RALs at several sample locations within the affected property boundary (including the location with the highest detections, E-11C, as discussed above). Vertical delineation to background was completed in the location of the highest detections (E-11C-B [2-4 ft bgs]) as noted above. In addition, surface water and sediment sampling results in the North Tributary did not exceed Critical PCLs, indicating that delineation is generally complete in this area.

### **3.2.2 Affected Property No. 2 (Production Area)**

Affected Property No. 2 (Production Area) encompasses the majority of the former production area, the Slag Landfill, and the North Disposal Area. The Undeveloped Buffer Property is located east of Affected Property No. 2 (PBW, 2014), where the affected property and PCLE Zone for the FOP extend to the Site boundary. Based on their historical use, the entire Slag Landfill and North Disposal Area were included within the affected property zone.

Exceedances of the soil RALs for lead and cadmium were detected in samples within the affected property, with a maximum lead concentration of 95,000 mg/kg in soil sample 2013-WMU14-1 (0.9-2'), collected from the Battery Receiving/Storage Building loading dock, and a maximum cadmium concentration of 984 mg/kg in soil sample 2012-FWFS-9 (Floor), collected from the excavation for the

French drain along the north side of the Flood Wall near the Slag Treatment Building. Maximum concentrations of antimony (32.4 mg/kg) and arsenic (36.7 mg/kg) were detected in soil sample 2013-MW-17B, in the Battery Storage Building area. Additional samples were collected in the vicinity of MW-17B in 2015 to perform additional delineation for antimony, arsenic and lead as needed based on review of existing data. Arsenic and antimony were delineated to the RAL by the 2-4 ft bgs interval at 2015-MW-17D. One VOC exceedance, benzene at 2013-STB-6 (0.0406 mg/kg compared to a RAL of 0.026 mg/kg) was detected. Benzene did not exceed its RAL in any other samples. Benzene was horizontally delineated in 2015 by 2015-STB-6A, 6B and 6C, but the original location of 2013-STB-6 was inaccessible at the time of the field investigations as previously discussed and vertical delineation at this location will be sampled when access becomes available.

The soil RAL exceedance zone for metals in Affected Property No. 2 was laterally delineated within the FOP site boundary as follows:

- The affected property boundary generally extends to the east Site boundary (Figure 4A) or is delineated at the Site boundary. The Undeveloped Buffer Property is located east of the eastern Site boundary and, as noted above, is being addressed separately (PBW, 2014). Arsenic delineation is complete on-Site in the areas of ECO-12, 2014-FFTA-05, 2014-FFTA-04, 2014-TS-3, 2014-AD-3A.
- Affected Property No. 2 was delineated between the former production area and Stewart Creek in many locations by numerous soil samples collected along the north side of the creek. The affected property boundary extends to Stewart Creek near the MW-27 area, MW-17 area, SCC-8, SCC-10, 2015-FWCS-5A, and 2015-FWCS-7A.
- The Flood Wall is included within the affected property boundary due to observations related to white crystalline material. This material was not observed at the time of the 2015 investigations but shallow samples were completed in the vicinity of where the material was previously suspected (2015-FWCS-5A, 2015-FWCS-6A and 2015-FWCS-7A) and these locations exceeded the RAL for lead. 2015-FWCS-7A (0-0.5) also exceeded RALs for antimony and arsenic. As noted above, these locations are included within the affected property boundary. These locations were vertically delineated for lead and cadmium in 2012 with samples 2012-FWCS-5, 2012-FWCS-6, and 2012-FWCS-7 all sampled from the 0-2 ft bgs interval. Additional vertical assessment of 2015-FWCS-7A for antimony and arsenic will be performed as part of a PDI or during excavation confirmation sampling.
- The northern boundary of the affected property to the north of the slag landfill is delineated by a series of soil samples between the slag landfill and the North Tributary. The affected property extends north to the North Tributary at the location of 2014-SL-5 (exceedance for lead) and ECO-13 (exceedance for arsenic). Delineation was specifically completed for arsenic in other areas along the northern boundary (2014-SL-7, 2014-SL-6 and 2014-SL-5).
- The northern boundary of the affected property in the wooded area to the north of the north disposal area and burn area is irregular. Additional samples collected in this area in 2015 identified exceedances of lead and arsenic in an area that was not previously included in the affected property boundary (2015-FFTA-08A, 2015-NDA-11, 2015-NDA-13, ECO-14, ECO-19, ECO-11B, ECO-11C, and ECO-11D). This area is delineated to the north by ECO-11, ECO-15, ECO-16, ECO-17, and ECO-18.

Consistent with 30 TAC §350.51(d)(2), RALs were used for vertical delineation purposes for lead and cadmium within Affected Property No. 2 since a groundwater assessment was performed in this area by sampling multiple groundwater monitoring wells within and downgradient of the affected property. Background was used for vertical delineation for arsenic since the RAL is equivalent to background. Vertical delineation to RALs was generally completed at depths of less than 5 feet bgs in each sampling area, typically at locations where the highest sample concentrations were observed. However, at several locations within the former production area, including within the Battery Receiving/Storage Building and Raw Material Storage Building, the affected property was vertically delineated at depths deeper than 5 feet bgs or was not vertically delineated before reaching the saturated zone (where soil delineation would terminate and groundwater assessment would be performed). Arsenic was vertically delineated to background in this area at 2013-RMSB-5 (9 ft bgs).

Vertical delineation was not completed at FWFS-5B because the location was inaccessible at the time of the field investigations as described above in Section 2.1.2 and will be sampled when access becomes available.

Soil samples at two locations within the Battery Receiving/Storage Building (2013-BSB-2 and 2013-BSB-9) and one location within the Raw Material Storage Building (2013-RMSB-4) from the approximate depth of observed saturation at these locations exceeded the applicable RAL for lead. Consistent with 30 TAC §350.51(d)(3), groundwater samples were collected from monitoring wells:

- MW-16 and MW-17, downgradient from the slag landfill/boneyard area;
- MW-26, downgradient from the Wastewater Treatment Building;
- MW-29, located downgradient of the Raw Material Storage Building;
- MW-31, within the Battery Receiving/Storage Building;
- MW-39 and MW-40, between the slag landfill area and the North Tributary;
- MW-44, in the truck wash area, to assess groundwater in this area; and
- MW-46, in the Wastewater Treatment Building area.

As shown on Table 5B.1 in the 2014 APAR, metals were not detected above RALs in the groundwater samples from these wells with the exception of the first sample collected from MW-46. Subsequent resampling, including a duplicate sample did not exceed RALs.

The depth of fill material within the North Disposal Area was assessed as part of the 1993 Addendum to the Phase I RFI (Lake, 1993). The reported maximum depth of fill material was 20 feet bgs, observed in test pits and soil borings completed in the North Disposal Area during the study.



### 3.2.3 Affected Property No. 3 (South Area)

Affected Property No. 3 (South Area) is located on the south side of the FOP property, south of Stewart Creek (Figure 1B.1). Exceedances of the soil RAL for lead were detected in soil samples from the vicinity of the South Disposal Area, the wooded area east of the South Disposal Area, and the former Shooting Range Berm and South Berm. Arsenic and antimony also exceeded their respective RALs in several locations. Based on its historical use, the entire South Disposal Area was included within the affected property boundary. The maximum soil sample concentration of lead in this area was 6,150 mg/kg in sample 2014-SDA-7 (0-0.5'), located near the southeast corner of the South Disposal Area. The maximum RAL exceedances for antimony (102 mg/kg) and arsenic (96.6 mg/kg) were also detected in this location.

The soil RAL exceedance zone (i.e., the affected property) was laterally delineated as follows:

- To the north by ECO-5, ECO-5A, ECO-8C, ECO-8D, 2015-SDA-3C, SCC-4, 2013-SDA-4B. The north boundary of the affected property boundary extends to Stewart Creek in the vicinity of SCC-5 but is delineated by soil samples below the RAL in all other areas. Samples collected in 2015 in the vicinity of SCC-5 exceeded the RALs for lead (at all three locations) and antimony (at one location). Arsenic was specifically delineated along the northern boundary by ECO-1A, ECO-5A, ECO-8D, ECO-8C, 2015-SDA-3C, 2013-SDA-4B, and the SCC-5 area
- To the northwest of B3RA (exceedances for arsenic and lead) by 2015 samples B3RA-B, B3RA-C and B3RA-D. The RAL for lead was exceeded at B3RA-A, but the Undeveloped Buffer Property is located to the west of this location and the location is delineated to the north by B3RA-D. Delineation was completed for arsenic in this area.
- To the west, south, and east of the Site by the Undeveloped Buffer Property, which is being addressed separately (PBW, 2014), as well as select soil sample locations (ECO-4A, ECO-7D, ECO-10A, SRB-VS-6, SRB-VS-7, SRB-VS-7A, SRB-VS-8, SRB-VS-9E, and SRB-VS-10).

Consistent with 30 TAC §350.51(d)(2), RALs were used for vertical delineation purposes within Affected Property No. 3 since a groundwater assessment was performed in this area. Background was used for vertical delineation for arsenic since the RAL is equivalent to background. The affected property was generally vertically delineated to the RAL at a maximum sample depth of 2 feet bgs in the vicinity (but outside the boundary) of the South Disposal Area and 0.5 feet bgs in the wooded area east of the South Disposal Area. Samples collected in 2015 provided delineation points for previous data gaps identified near the northwest corner of the affected property and along the northern affected property boundary. Samples SRB-VS-7A and SRB-VS-3A were collected in 2015 and provided confirmation of the affected property boundary with respect to antimony and arsenic near the southwest corner of the South Disposal Area (both were below RALs for antimony and arsenic).

In the location of highest lead, antimony and arsenic concentrations (2014-SDA-7), arsenic was delineated vertically to RALs, but lead and antimony were not vertically delineated at the maximum

sample depth, 2 feet bgs (antimony was not delineated due to data quality issues in the deeper sample as reported in the 2014 APAR). Vertical delineation will be completed at the time of excavation by conducting confirmation sampling in this area. Groundwater samples at B4R (located downgradient of 2014-SDA-7) did not exceed the RALs for metals.

### **3.2.4 Affected Property No. 4 (Crystallizer Way)**

Affected Property No. 4 (Crystallizer Way) is a portion of the road (Crystallizer Way) and adjacent ditch. Crystallizer Way is a road extending west from Eagan Drive, past the storm water retention pond to the west boundary of the Site. Affected Property No. 4 includes an approximately 500 foot long section of the Site generally to the south of Crystallizer Way, including 2014-CUFT-5B-A at the east end and 2014-CUFT-16 at the west end. Several soil samples were found to exceed the RAL for lead, and further delineation samples were collected in 2015. None of the samples in this affected property exceeded the RAL for arsenic.

The area is delineated to the east and west by 2013-CUFT-4 and 2015-CUFT-16A, respectively. In general, areas to the south are included within the Undeveloped Buffer Property PCLE Zone (Figure 4A). The affected property was delineated to the north by a series of borings north of Crystallizer Way, including two samples collected in 2015, 2015-CUFT-16D and 2015-CUFT-15A. At the location of maximum concentration, 2014-CUFT-16 (1,530 mg/kg), lead was vertically delineated to the RAL at a depth of 0.5 feet bgs (117 mg/kg), but not to background. An additional vertical delineation sample was collected at 2015-CUFT-16C (located adjacent to 2015-CUFT-16) and the results from 2-4 ft bgs and 4-6 ft bgs were also below the RAL but not below background. At most sampling locations, the maximum depth of RAL exceedance was observed at 0.5 feet bgs. Additional evaluation at 2014-CUFT-16C will be completed in the future to vertically delineate COCs to below background concentrations in accordance with 30 TAC §350.51(d)(1) since groundwater assessment was not performed in this area.

### **3.2.5 Affected Property No. 5 (West and Southwest of Class 2 Landfill)**

Affected Property No. 5 (West and Southwest of Class 2 Landfill) includes an area to the west of the Class 2 Landfill with one small area extending onto the final cap of the Class 2 Landfill (near the southwest corner of the Landfill).

In this affected property, several samples exceeded RALs for lead, antimony, selenium, and/or arsenic. Impacts were laterally delineated within the Site boundary to the north, south, east (by Class 2 Landfill cap samples) and west (with the exception of 2015-CL2-06F for arsenic and selenium and, 2015-CL2-06J for selenium and 2015-C2L-06K for lead). The solar evaporation pond is located to the west of 2015-CL2-06F, 2015-CL2-06J and 2015-C2L-06K. The area immediately west of these samples is the current

location of the Solar Evaporation Pond. A more extensive investigation of the soils beneath the solar evaporation pond will be performed at the time of decontamination and demolition, if warranted.

At the location of the maximum concentration for all four of these metals, 2014-C2L-6C (lead at 2,970 mg/kg, antimony at 7.99 mg/kg, selenium at 7.09 mg/kg, and arsenic at 28.0 mg/kg), lead, arsenic and selenium were vertically delineated to below the RAL; and antimony was vertically delineated to below background. Consistent with 30 TAC §350.51(d)(2), RALs were used for vertical delineation since a groundwater assessment was performed in this area. Groundwater samples collected at LMW-5 and LMW-21, in and downgradient from Affected Property No. 5, did not exceed RALs for arsenic, selenium, lead, or cadmium.

### **3.2.6 Affected Property No. 6 (Lake Parcel North)**

Affected Property No. 6 (Lake Parcel North) includes one sample location (F-5) in the north part of the Lake Parcel where the lead concentration (367 mg/kg) exceeded the RAL in the 0 to 3-inch bgs depth interval (Figure 4A). Delineation samples were collected surrounding F-5, and none were found to exceed the RAL. Consistent with 30 TAC §350.51(d)(1), background was used for vertical delineation purposes for lead within Affected Property No. 6 since a groundwater assessment was not performed in this area. The sample at the 1 foot bgs interval also did not exceed background. This area is considered to be delineated vertically and horizontally.

No additional soil assessment was performed for this affected property in 2015.

### **3.2.7 Affected Property No. 7 (North Tributary at Boundary)**

Affected Property No. 7 (North Tributary at Boundary) includes one soil sample location exceeding the lead RAL (2014-NT-3) located between the North Tributary and the M Tract of the Undeveloped Buffer Property. The concentration of lead in the 0 to 0.5 foot bgs sample at 2014-NT-3 (353 mg/kg) exceeded the RAL. The area is bounded to the east and west by samples that do not exceed the RAL; to the north by the Undeveloped Buffer Property (areas to the north are within the Undeveloped Buffer Property PCLE Zone) and to the south by the North Tributary, including sediment samples in the North Tributary. Consistent with 30 TAC §350.51(d)(1), background was used for vertical delineation purposes within Affected Property No. 7 since a groundwater assessment was not performed in this area. The soil sample is vertically delineated on the Site to the RAL but not to background at 0.5 feet. However, areas immediately adjacent to the north on the Undeveloped Buffer Property with higher concentrations of lead have been vertically delineated to background (PBW, 2014). Two samples collected between the north tributary and the M Tract (2014-NT-4 and 2014-NT-3) were also analyzed for arsenic and neither exceeded the RAL.

No additional soil assessment was performed for this affected property in 2015.

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### **3.2.8 Affected Property No. 8 (Stewart Creek Sediments)**

Affected Property No. 8 (Stewart Creek Sediments) includes on-site and downstream areas of Stewart Creek from just east of the Battery Receiving/Storage Building to the upstream end of the USACE property. Assessment of Stewart Creek sediments was previously described in the 2014 APAR and additional data for Stewart Creek sediments was included in the Interim Action Report, Slag and Battery Case Fragment Removal and Disposal prepared by Golder Associates dated August 22, 2015 (Golder, 2014b). No sediment sampling was performed in 2015. Additional assessment of Stewart Creek is planned and is addressed under separate cover.

### **3.2.9 Affected Property No. 9 (Entrance Driveway to Crystallization Unit)**

As described above, Possible Affected Property No. 10 was defined in the 2014 APAR by a single XRF sample collected south of Stewart Creek near the entrance driveway to the Crystallization Unit during the 2013 W&M Interim Actions (W&M, 2013). A confirmation sample (2014-SCC-16) was collected in this location and analyzed for lead in May 2014 (but not in time to include in the 2014 APAR). The result for 2014-SCC-16 (358 mg/kg) exceeded the RAL for lead (274.5 mg/kg). This possible affected property is now designated Affected Property No.9. The affected property has been renumbered because, as described above, Possible Affected Property No. 9 has been eliminated as an affected property.

The affected property is bounded to the northeast by Stewart Creek and delineated for lead to the northwest and southeast by samples SCC-7 and 2015-SCC-16F, respectively. The area is not delineated to the southwest and additional data to the southwest will be collected as part of a PDI or during excavation confirmation sampling.

Consistent with 30 TAC §350.51(d)(1), background was used for vertical delineation purposes within Affected Property No. 9 since a groundwater assessment was not performed in this area. Lead at this location was vertically delineated to background at the location of the highest detection, 2015-SCC-16B 0.5-2 ft bgs.

Two samples within this affected property (2015-SCC-16E and 2015-SCC-16C) were also analyzed for arsenic and neither exceeded the RAL. In addition, the sample to the southeast, 2015-SCC-16F also was below the RAL for arsenic.

### **3.2.10 Additional Lake Parcel Assessment**

In addition to the areas above, thirteen borings were completed on the Lake Parcel to delineate lead previously detected between 250 mg/kg and the RAL (274.5 mg/kg) at locations F-4, G-5 and G-6. This area is not considered an affected property but was delineated to 250 mg/kg at the request of the City of Frisco. Lead was not detected above the RAL in any of the locations. Arsenic was detected slightly above the RAL (background concentration) at one location but is considered representative of

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background conditions. In addition, the duplicate sample at this location did not exceed the RAL for arsenic and arsenic was not detected above the RAL in any of the other samples collected in this area.

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## 4.0 CONCLUSIONS

During the additional investigation performed for this Supplement to the 2014 APAR, samples were collected to address the need for additional vertical or horizontal delineation of various Affected Properties or specific data requests by TCEQ in the May 5, 2015 Comments to the 2014 APAR (TCEQ, 2015). TCEQ required that the supplement to the APAR addressing these comments be submitted by September 2, 2015. Exide completed two additional rounds of sampling/testing at the Site following the receipt of comments by TCEQ, and many of the previous data gaps have been resolved. Only a few areas remain that were not fully delineated laterally and vertically within the TCEQ-required timeframe for submission.

As was the case at the time of submission of the 2014 APAR, Exide agrees with TCEQ that although it is acknowledged that delineation is not 100% complete in all areas of the Site for all metals, based on the amount of information collected for the Site to date, there is sufficient data to prepare a RAP for the Site (TCEQ, 2015). The few remaining areas where data gaps exist can be addressed at the time that remedial actions are implemented (through excavation confirmation samples or as part of a PDI) or when specific features at the Site are decontaminated and demolished (such as the Crystallization Unit and Solar Evaporation Pond).



## 5.0 CLOSING

Golder appreciates the opportunity to assist Exide with this project. Please contact the undersigned if you have any questions or comments regarding this Supplement to the 2014 APAR.

Sincerely,

**GOLDER ASSOCIATES INC.**



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AMF/JW/MRS

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## 6.0 REFERENCES

- Exide Technologies (Exide), 2015. Response to 5/5/15 TCEQ Comments to the Affected Property Assessment Report for the Former Operating Plant, Exide Frisco Recycling Facility. July 2.
- Golder Associates Inc. (Golder), 2014a. Affected Property Assessment Report, Former Operating Plant, Frisco Recycling Facility, Frisco, Collin County, Texas. July 9.
- Golder Associates Inc. (Golder), 2014b. Interim Action Report, Slag and Battery Case Fragment Removal and Disposal, Exide Frisco Recycling Facility. August 22.
- Pastor, Behling & Wheeler, LLC (PBW), 2013. Affected Property Assessment Report, Former Operating Plant, Frisco Recycling Facility, Frisco, Collin County, Texas. July 9.
- Pastor, Behling & Wheeler, LLC (PBW), 2014. Affected Property Assessment Report, Exide Technologies Undeveloped Buffer Property, Frisco, Collin County, Texas. April 1.
- Texas Commission on Environmental Quality (TCEQ), 2015. Comments to the Affected Property Assessment Report (APAR) for the Former Operating Plant, dated May 22, 2014. May 5.
- W&M Environmental (W&M), 2013. Implementation of Interim Actions, Slag and Battery Case Fragment Removal and Disposal, Exide Frisco Recycling Facility, Frisco, Texas. October 14.



## Tables

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### TABLES

Table 1 Supplement to the Affected Property Assessment Report  
**Soil Data Summary -**  
**Lead, Cadmium, and Additional Metals (2015)**

Sample ID	Sample Date	Sample Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
Surface Soil Residential Assessment Level <sup>1</sup> :			2.7	15.9	30	274.5	1.6
Surface Soil Critical PCL <sup>2</sup> :			2.7	15.9	30	274.5	1.6
Subsurface Soil Residential Assessment Level <sup>1</sup> :			2.7	15.9	30	274.5	1.6
Subsurface Soil Critical PCL <sup>2</sup> :			2.7	15.9	30	274.5	1.6
<b>STEWART CREEK CORRIDOR</b>							
2015-MW-17C (0-0.5)	06/10/15	(0-0.5)	0.611 J	19.5	--	42.2 J	--
2015-MW-17D (0.5-2)	06/10/15	(0.5-2)	20.6 J	24.7	--	1,600 J	--
2015-MW-17D (2-4)	06/10/15	(2-4)	0.293 UJL	14.5	--	101 J	--
SCC-5C (0-0.5)	06/10/15	(0-0.5)	2.05 J	--	--	1,580	--
SCC-5C (0.5-2)	06/10/15	(0.5-2)	8.81 JL	--	--	5,160 J	--
SCC-5D (2-4)	07/27/15	(2-4)	0.256 UJL	2.54	0.160 J	637	0.286 U
2014-SCC-16 (0-0.5)	05/13/14	(0-0.5)	--	--	--	358 J	--
2015-SCC-16A (0-0.5)	06/10/15	(0-0.5)	--	--	--	582 J	--
2015-SCC-16B (0-0.5)	06/10/15	(0-0.5)	--	--	--	2,010 J	--
2015-SCC-16B (0.5-2)	06/10/15	(0.5-2)	--	--	--	16.9 J	--
2015-SCC-16C (0-0.5)	06/10/15	(0-0.5)	--	--	--	810 J	--
2015-SCC-16D (0.5-2)	06/10/15	(0.5-2)	--	--	--	40.8 J	--
2015-SCC-16D (0.5-2) DUP-4	06/10/15	(0.5-2)	--	--	--	27.6 J	--
2015-SCC-16E (0-0.5)	07/27/15	(0-0.5)	0.257 UJL	11.2	0.487	215 J	0.287 U
2015-SCC-16E DUP-1	07/27/15	(0.5-2)	0.920 JL	12.2	0.543	580	0.287 U
2015-SCC-16F (0-0.5)	07/27/15	(0-0.5)	0.257 UJL	11.2	0.597	104	0.286 U
2015-SCC-16G (0-0.5)	07/27/15	(0-0.5)	0.671 JL	11.0	1.45	282 J	0.290 U
<b>SOUTH AREA</b>							
<i>Crystallization Unit Area</i>							
2015-CUFT-15A (0-0.5)	06/08/15	(0-0.5)	--	--	--	141 J	--
2015-CUFT-16A (0-0.5)	06/08/15	(0-0.5)	--	--	--	69.0 J	--
2015-CUFT-16B (0-0.5)	06/08/15	(0-0.5)	--	--	--	1,020 J	--
2015-CUFT-16B (0.5-2)	06/08/15	(0.5-2)	--	--	--	17.0	--
2015-CUFT-16C (2-4)	06/08/15	(2-4)	--	--	--	104 J	--
2015-CUFT-16C (2-4) DUP-2	06/08/15	(2-4)	--	--	--	22.5 J	--
2015-CUFT-16C (4-6)	06/08/15	(4-6)	--	--	--	83.0	--
2015-CUFT-16D (0-0.5)	07/27/15	(0-0.5)	0.256 UJL	11.9	0.828	114 J	0.286 U
2014-CUFT-19 (0-0.5)	05/13/14	(0-0.5)	--	--	--	232	--
<i>Shooting Range Berm and South Berm Verification Samples</i>							
SRB-VS-3A (0-0.5)	06/08/15	(0-0.5)	0.263 UJL	10.7	--	--	--
SRB-VS-7A (0-0.5)	06/08/15	(0-0.5)	0.250 UJL	14.8	--	--	--
<i>South Disposal Area</i>							
B3RA-A (0-0.5)	06/08/15	(0-0.5)	--	15.0	--	501 J	--
B3RA-A (0-0.5) DUP-1	06/08/15	(0-0.5)	--	14.0	--	75.9 J	--

Former Operating Plant  
 Frisco Recycling Center  
 Frisco, Texas

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Sample ID	Sample Date	Sample Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
Surface Soil Residential Assessment Level <sup>1</sup> :			2.7	15.9	30	274.5	1.6
Surface Soil Critical PCL <sup>2</sup> :			2.7	15.9	30	274.5	1.6
Subsurface Soil Residential Assessment Level <sup>1</sup> :			2.7	15.9	30	274.5	1.6
Subsurface Soil Critical PCL <sup>2</sup> :			2.7	15.9	30	274.5	1.6
B3RA-B (0-0.5)	06/08/15	(0-0.5)	--	<b>13.0</b>	--	<b>95.6 J</b>	--
B3RA-C (0-0.5)	06/08/15	(0-0.5)	--	<b>14.7</b>	--	<b>249 J</b>	--
B3RA-D (0-0.5)	07/27/15	(0-0.5)	0.262 UJL	<b>9.54</b>	<b>.0152 J</b>	<b>30.7 J</b>	0.292 U
ECO-5-A (0-0.5)	06/10/15	(0-0.5)	0.266 U	<b>15.1</b>	--	--	--
ECO-8C (0-0.5)	06/09/15	(0-0.5)	<b>1.37 J</b>	<b>11.0</b>	--	<b>182</b>	--
ECO-8D (0-0.5)	06/09/15	(0-0.5)	<b>0.432 J</b>	<b>12.9</b>	--	<b>27.0</b>	--
2015-SDA-3C (0-0.5)	06/09/15	(0-0.5)	<b>1.21 J</b>	<b>10.3</b>	--	<b>205</b>	--
<b>NORTH AREA</b>							
<b>Class 2 Landfill</b>							
2015-C2L-06D (0-0.5)	06/11/15	(0-0.5)	--	--	--	<b>331 b</b>	--
2015-C2L-06E (0-0.5)	06/08/15	(0-0.5)	--	--	--	<b>1,100 J</b>	--
2015-C2L-06F (0-0.5)	06/08/15	(0-0.5)	<b>0.958 JL</b>	<b>18.8</b>	--	<b>221 J</b>	<b>2.52 J</b>
2015-C2L-06G (0-0.5)	07/29/15	(0-0.5)	--	--	--	<b>32.4</b>	--
2015-C2L-06H (0.5-1)	07/29/15	(0.5-1)	--	--	--	<b>149</b>	--
2015-C2L-06J (0-0.5)	07/29/15	(0-0.5)	--	<b>13.5</b>	--	--	<b>2.55</b>
2015-C2L-06K (0-0.5)	07/29/15	(0-0.5)	--	--	--	<b>1,360</b>	--
2015-C2L-C01D (0-0.5)	06/11/15	(0-0.5)	--	<b>7.80 J</b>	--	--	--
2015-C2L-C01D (0-0.5) DUP-9	06/11/15	(0-0.5)	--	<b>15.2 J</b>	--	--	--
<b>North Tributary Corridor and North Wooded Area</b>							
ECO-13 (0-0.5)	07/28/15	(0-0.5)	--	<b>19.4</b>	--	<b>180</b>	--
ECO-14 (0-0.5)	07/28/15	(0-0.5)	--	<b>22.7</b>	--	<b>2,450</b>	--
ECO-15 (0-0.5)	07/28/15	(0-0.5)	--	<b>13.9</b>	--	<b>115</b>	--
ECO-16 (0-0.5)	07/28/15	(0-0.5)	--	<b>13.9</b>	--	<b>219</b>	--
ECO-17 (0-0.5)	07/28/15	(0-0.5)	--	--	--	<b>196</b>	--
ECO-18 (0-0.5)	07/28/15	(0-0.5)	--	--	--	<b>218 J</b>	--
ECO-19 (0-0.5)	07/28/15	(0-0.5)	--	<b>15.8</b>	--	<b>1,190</b>	--
D-11C (0.5-2)	06/10/15	(0.5-2)	--	<b>16.9 J</b>	--	--	--
D-11C (0.5-2) DUP-6	06/10/15	(0.5-2)	--	<b>7.25 J</b>	--	--	--
D-11C (2-4)	06/10/15	(2-4)	--	<b>9.97</b>	--	--	--
D-11D (0-0.5)	06/10/15	(0-0.5)	--	<b>8.89</b>	--	--	--
D-11E (0-0.5)	06/10/15	(0-0.5)	--	<b>28.3</b>	--	--	--
D-11F (0-0.5)	07/29/15	(0-0.5)	--	<b>9.98</b>	--	--	--
E-11C-C (0-0.5)	06/10/15	(0-0.5)	--	<b>10.3</b>	--	<b>704</b>	--
E-11C-D (0-0.5)	06/10/15	(0-0.5)	--	<b>16.2</b>	--	<b>155</b>	--

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Sample ID	Sample Date	Sample Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
<b>Surface Soil Residential Assessment Level<sup>1</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Surface Soil Critical PCL<sup>2</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Subsurface Soil Residential Assessment Level<sup>1</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Subsurface Soil Critical PCL<sup>2</sup>:</b>			2.7	15.9	30	274.5	1.6
E-11C-B (2-4)	06/10/15	(2-4)	--	<b>9.95</b>	--	<b>19.0</b>	--
E-15B (0-0.5)	07/29/15	(0-0.5)	--	<b>15.5</b>	--	--	--
ECO-11A (0-0.5)	06/11/15	(0-0.5)	--	<b>11.6</b>	--	<b>158 b</b>	--
ECO-11B (0-0.5)	06/11/15	(0-0.5)	--	<b>16.2</b>	--	<b>743 b</b>	--
ECO-11C (0-0.5)	06/11/15	(0-0.5)	--	<b>17.8</b>	--	<b>4,000 b</b>	--
ECO-11C (0.5-2)	06/11/15	(0.5-2)	--	<b>16.8</b>	--	<b>17.2</b>	--
ECO-11D (0-0.5)	06/11/15	(0-0.5)	--	<b>14.9</b>	--	<b>554 b</b>	--
<b>North Disposal Area</b>							
2015-NDA-11 (0-0.5)	06/11/15	(0-0.5)	--	--	--	<b>4,440 J</b>	--
2015-NDA-11 (0-0.5) DUP-7	06/11/15	(0-0.5)	--	--	--	<b>1,120 J</b>	--
2015-NDA-12 (0-0.5)	06/11/15	(0-0.5)	--	--	--	<b>44.7</b>	--
2015-NDA-13 (0-0.5)	06/11/15	(0-0.5)	--	--	--	<b>350 b</b>	--
<b>FORMER FIREFIGHTER TRAINING AREA</b>							
2015-FFTA-08A (0-0.5)	06/11/15	(0-0.5)	--	<b>11.5</b>	--	<b>342</b>	--
<b>FORMER PROCESS AREA</b>							
<b>Flood Wall Creek Side</b>							
2015-FWCS-5A (0-0.5)	06/11/15	(0-0.5)	<b>1.90 JL</b>	<b>13.1</b>	<b>4.07</b>	<b>1,040 b</b>	<b>0.796 J</b>
2015-FWCS-6A (0-0.5)	06/11/15	(0-0.5)	<b>1.07 JL</b>	<b>12.2</b>	<b>2.67</b>	<b>570 b</b>	0.307 U
2015-FWCS-7A (0-0.5)	06/11/15	(0-0.5)	<b>5.09 JL</b>	<b>17.1</b>	<b>9.62</b>	<b>1,730 b</b>	<b>1.34 J</b>
<b>Lake Parcel</b>							
F-4A (0-0.5)	07/27/15	(0-0.5)	0.289 UJL	<b>14.4</b>	<b>1.90</b>	<b>178 J</b>	0.323 U
F-4B (0-0.5)	07/27/15	(0-0.5)	0.295 UJL	<b>14.1</b>	<b>0.597</b>	<b>18.3 J</b>	0.329 U
F-4C (0-0.5)	07/27/15	(0-0.5)	0.285 UJL	<b>13.4</b>	<b>0.847</b>	<b>69.5 J</b>	0.318 U
F-4D (0-0.5)	07/27/15	(0-0.5)	0.297 UJL	<b>14.6</b>	<b>0.763</b>	<b>20.8 J</b>	0.332 U
F-4E (0.5-2)	07/27/15	(0.5-2)	0.280 UJL	<b>14.3</b>	<b>0.663</b>	<b>25.1 J</b>	0.312 U
G-5A (0-0.5)	07/27/15	(0-0.5)	0.286 UJL	<b>13.5</b>	<b>1.99</b>	<b>176 J</b>	<b>0.339 J</b>
G-5B (0-0.5)	07/27/15	(0-0.5)	0.283 UJL	<b>13.5</b>	<b>1.25</b>	<b>146 J</b>	0.316 U
G-5C (0-0.5)	07/27/15	(0-0.5)	0.278 UJL	<b>13.8</b>	<b>1.78</b>	<b>193 J</b>	<b>0.323 J</b>
G-5D (0-0.5)	07/27/15	(0-0.5)	0.298 UJL	<b>14.6</b>	<b>1.30</b>	<b>153 J</b>	0.332 U
G-6A (0-0.5)	07/27/15	(0-0.5)	0.273 UJL	<b>16.3</b>	<b>0.842</b>	<b>41.5 J</b>	0.305 U
G-6A (0-0.5) DUP-3	07/27/15	(0-0.5)	0.275 UJL	<b>14.6</b>	<b>0.671</b>	<b>26.0</b>	0.307 U
G-6B (0-0.5)	07/27/15	(0-0.5)	0.269 UJL	<b>14.9</b>	<b>1.63</b>	<b>102 J</b>	0.301 U
G-6C (0-0.5)	07/27/15	(0-0.5)	0.263 UJL	<b>10.0</b>	<b>0.385</b>	<b>33.3 J</b>	0.293 U
G-6D (0.5-2)	07/27/15	(0.5-2)	0.285 UJL	<b>11.7</b>	<b>0.855</b>	<b>157 J</b>	0.319 U

Former Operating Plant  
Frisco Recycling Center  
Frisco, Texas

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Sample ID	Sample Date	Sample Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
<b>Surface Soil Residential Assessment Level<sup>1</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Surface Soil Critical PCL<sup>2</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Subsurface Soil Residential Assessment Level<sup>1</sup>:</b>			2.7	15.9	30	274.5	1.6
<b>Subsurface Soil Critical PCL<sup>2</sup>:</b>			2.7	15.9	30	274.5	1.6

## Notes:

RAL/Critical PCL exceedances are highlighted. Detections are bolded.

1. <sup>1</sup> - The Residential Assessment Level (RAL) is the lower of the TRRP residential Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> (applicable to surface soil only), <sup>Air</sup>Soil<sub>Inh-V</sub> (applicable to mercury only), and Tier 1 or Tier 2 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acresource area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.

2. <sup>2</sup> - The critical PCL is the lower of the TRRP commercial-industrial Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> (applicable to surface soil only), <sup>Air</sup>Soil<sub>Inh-V</sub> (applicable to mercury only), and Tier 1 or Tier 2 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.

3. Surface Soil = 0-15 feet bgs for residential land use and 0-5 feet bgs for commercial-industrial land use; subsurface soil = greater than 15 feet bgs for residential land use and greater than 5 feet bgs for commercial-industrial land use.

4. Data Qualifiers: b - compound was found in the blank and the sample; J - estimated result; U - analyte was not detected at or above the sample detection limit. Value shown is the method quantitation limit; L - bias in sample result is likely to be low.

5. bgs - below ground surface.

6. "--" - Not analyzed.

7. mg/kg - milligrams per kilogram.

Table 2 Supplement to the Affected Property Assessment Report  
**Soil Data Summary -**  
**Revised Results for Lead, Cadmium, and Additional Metals (2014)**

Sample ID	Sample Date	Sample Depth (feet)	Antimony (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)
<b>Surface Soil Residential Assessment Level<sup>1</sup>:</b>			2.71	15.90	30.00	274.51	1.60
<b>Surface Soil Critical PCL<sup>2</sup>:</b>			2.71	15.90	30.00	274.51	1.60
<b>Subsurface Soil Residential Assessment Level<sup>1</sup>:</b>			2.71	15.90	30.00	274.51	1.60
<b>Subsurface Soil Critical PCL<sup>2</sup>:</b>			2.71	15.90	30.00	274.51	1.60
<b>NORTH AREA</b>							
<i><b>North Tributary Corridor and North Wooded Area</b></i>							
D-13A	01/09/14	0-0.5	--	<b>14.0</b>	<b>0.503</b>	<b>67.3</b>	--
E-13A	01/10/14	0-0.5	--	<b>13.8</b>	<b>0.492</b>	<b>44.4</b>	--
E-14A	01/10/14	0-0.5	--	<b>19.0</b>	<b>1.84</b>	<b>349</b>	--
E-11C-A	01/09/14	0.5-2	0.291 U	<b>13.8</b>	<b>0.515</b>	<b>88.5</b>	0.325 U
2013-NT-02 (0-0.5)	01/10/14	0-0.5	<b>1.13 J</b>	<b>14.9</b>	<b>4.89</b>	<b>837</b>	<b>0.654 J</b>
<b>STEWART CREEK CORRIDOR</b>							
SCC-5A	01/10/14	0-0.5	0.278 U	--	<b>0.258 J</b>	<b>29.8</b>	
MW-27B (2-4)	01/09/14	2-4	--	<b>11.9</b>	<b>0.480 J</b>	<b>27.6</b>	
<b>SOUTH AREA</b>							
<i><b>South Wooded Area</b></i>							
ECO-10A (0-0.5)	01/10/14	0-0.5	0.263 UJL	<b>6.76</b>	<b>0.409 J</b>	<b>21.4 J</b>	<b>0.534 J</b>
ECO-4B (0-0.5)	01/13/14	0-0.5	<b>0.752 J</b>	<b>31.5</b>	<b>1.21 JL</b>	<b>201 JL</b>	<b>0.573 J</b>
<i><b>Shooting Range Berm and South Berm Verification Samples</b></i>							
SRB-VS-9E (0-0.5)	01/10/14	0-0.5	--	<b>9.26</b>	<b>0.210 J</b>	<b>31.0</b>	0.311 U

**Notes:**

RAL/Critical PCL exceedances are highlighted. Detections are bolded.

- <sup>1</sup> - The Residential Assessment Level (RAL) is the lower of the TRRP residential Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> (applicable to surface soil only), <sup>Air</sup>Soil<sub>Inh-v</sub> (applicable to mercury only), and Tier 1 or Tier 2 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.
- <sup>2</sup> - The critical PCL is the lower of the TRRP commercial-industrial Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> (applicable to surface soil only), <sup>Air</sup>Soil<sub>Inh-v</sub> (applicable to mercury only), and Tier 1 or Tier 2 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.
- Surface Soil = 0-15 feet bgs for residential land use and 0-5 feet bgs for commercial-industrial land use; subsurface soil = greater than 15 feet bgs for residential land use and greater than 5 feet bgs for commercial-industrial land use.
- Data Qualifiers: J - estimated result; U - analyte was not detected at or above the sample detection limit. Value shown in the method quantitation limit.
- bgs - below ground surface.
- "--" - Not analyzed.
- mg/kg - milligrams per kilogram.



Table 3  
**Soil Data Summary -  
 2015 Benzene Results**

Sample ID	Sample Date	Sample Depth (feet)	Benzene (mg/kg)
Surface Soil Residential Assessment Level <sup>1</sup> :			0.026
Surface Soil Critical PCL <sup>2</sup> :			0.026
Subsurface Soil Residential Assessment Level <sup>1</sup> :			1180.24
Subsurface Soil Critical PCL <sup>2</sup> :			-
<b>FORMER PRODUCTION AREA</b>			
<b><i>Slag Treatment Building</i></b>			
2015-STB-6A (1-2)	06/09/15	1-2	<b>0.00124 J</b>
2015-STB-6A (4-6)	06/09/15	4-6	0.000895 U
2015-STB-6A (6-8)	06/09/15	6-8	0.00784 U
2015-STB-6B (1-2)	06/09/15	1-2	0.000868 U
2015-STB-6C (0.75-2)	06/09/15	0.75-2	<b>0.000688 J</b>
2015-STB-6C (0.75-2) DUP-3	06/09/15	0.75-2	0.000692 U

Notes:

RAL/Critical PCL exceedances are highlighted. Detections are bolded.

1. <sup>1</sup> - Residential Assessment Levels (RALs) are the lower of the TRRP Tier 1 residential <sup>Tot</sup>Soil<sub>Comb</sub> and <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 0.5-acre source area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.

2. <sup>2</sup> - Critical PCLs are the lower of the TRRP commercial-industrial Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 0.5-acre source area. More information on the TRRP protective concentration levels can be accessed at <http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>.

3. Surface Soil = 0-15 feet bgs for residential land use and 0-5 feet bgs for commercial-industrial land use; subsurface soil = greater than 15 feet bgs for residential land use and greater than 5 feet bgs for commercial-industrial land use.

4. Data Qualifiers: J - estimated result; U - analyte was not detected at or above the sample detection limit. Value shown in the method quantitation limit.

5. bgs - Below ground surface.

6. mg/kg - milligrams per kilogram



## Figures

## FIGURES





**EXPLANATION**

- On-Site Property Boundary
- FRC Property Boundary
- Former Path of North Tributary (1951 Aerial Photo)
- Former Path of North Tributary (1972 Aerial Photo)
- Former Path of Stewart Creek (1951 Aerial Photo)
- Stewart Creek (Approximate Creek Centerline)
- North Tributary (Approximate Creek Centerline)
- Monitoring Well Location
- Soil Boring Location (2012 - 2015)
- Soil Sample Location (2012 - 2014)
- Phase II RFI Soil Sample Location (1998)
- Phase I RFI Soil Sample Location (1991)
- Disposal Area Delineation Boring Location (1993)
- Dredged Sediment Stockpile Sample Location (1986)
- Dredged Sediment Stockpile Sample Location (1987)
- Old Drum Storage Area Sample Location (1987)
- Geotech Boring Location (2011)
- Class 2 Landfill Notification Boring (1995)
- Critical PCL Exceedance Zone (PCL Zone)
- J-Parcel PCL Exceedance Zone (PCL Zone)
- Surface Drainage Direction
- Water Line
- Fire Hydrant
- Sanitary Sewer Line
- Sanitary Sewer Manhole
- Stormwater Line
- Stormwater Inlet/Basin
- Gas Line
- Fiber Optic Line
- Flood Wall Location

Note:  
1. Locations of utilities shown are approximate. Additional underground utilities are present throughout the former production area, commonly within concrete trenches.  
2. Original figure prepared by PBW as part of the APAR dated July 9, 2013. Modified by Golder in May 2014.

Scale in Feet  
0 75 150

Source of photo:  
Imagery from NCTCOG, 2009 photography.  
Source of utilities:  
City of Frisco, GIS Department

**FORMER OPERATING PLANT  
FRISCO RECYCLING CENTER  
FRISCO, TEXAS**

Figure 1B.1  
**AFFECTED PROPERTY MAP  
ON-SITE**

PROJECT: 13-02086	BY: BCL	REVISIONS
DATE: MARCH, 2014	CHECKED: JMT	

**GOLDER ASSOCIATES, INC.**





**Legend**

**Location Type**

- Monitoring Well Location
- Soil Boring / Soil Sample Location (2012 - 2015)

**Action\_Level\_Exceedance\_all**

**Action Level (0 - 5 feet bgs)**

- Exceedence of Lead RAL/Critical PCL for Soil
- No Exceedence of Lead RAL/Critical PCL for Soil

**Action Level (5 - 15 feet bgs)**

- Exceedence of Lead RAL/Critical PCL for Soil
- No Exceedence of Lead RAL/Critical PCL for Soil

**Action Level (>15 feet bgs)**

- No Exceedence of Lead RAL/Critical PCL for Soil

Former Path of North Tributary (1951 Aerial Photo)

Former Path of North Tributary (1972 Aerial Photo)

Former Path of Stewart Creek (1951 Aerial Photo)

French Drain

Stewart Creek (Approximate Creek Centerline)

North Tributary (Approximate Creek Centerline)

Approximate Extent of Disposal Area

Critical PCL Exceedence (PCLE Zone)

J-Parcel PCLE Zone

Former Operating Plant

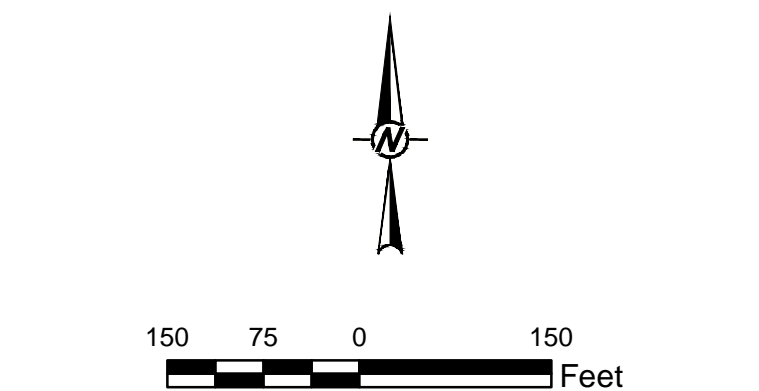
Undeveloped Buffer Property

Notes:

1. A location with no action level symbol means the location was not sampled for the displayed constituent or was not sampled as a part of the SIR or APAR investigations.
2. Soil samples analyzed for the SIR and APAR investigations (2012-2015) were used to delineate affected property boundaries. Therefore, only SIR and APAR soil sample results are presented. Older historical soil sample data are presented in Appendix 17 of this APAR.

Source:

1. Basemap by PBW as part of the APAR dated July 9, 2013. Modified by Golder May 2014.
2. Locations - PBW and Golder, 2012 - 2015
3. Aerial Imagery: NCTCOG, 2009 photography.



Scale: AS SHOWN  
File No. 1302086T006 APAR FIG 4A1 Pb.mxd

FORMER OPERATING PLANT FRISCO RECYCLING CENTER FRISCO, TEXAS		
FIGURE 4A SOIL COC CONCENTRATION MAP LEAD		
PROJECT NO. 13-02086	BY: JWT	REVISIONS
DATE: 9/26/2015	CHECKED: LABE/PW	
GOLDER ASSOCIATES INC.		





## Appendix A

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### APPENDIX A Boring Logs

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06DDATE 6/11/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent Burnham

TIME 1125

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
0-5  10  15	1	N/A	<u>3.4</u> 4.0	0.0-0.5 (1140)	0.0-2.0 FT, (ML) CLAYEY SILT with trace gravel, organic material; brown; loose, very dry, hard.
				0.5-2.0 (1140)	
				2.0-4.0 (1140)	2.0-4.0 FT, (CH) CLAY, trace gravel; dark brown, dry, stiff.
					End of borehole at 4 FT BGS

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION      Class 2 Landfill

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06EDATE 6/08/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent Burnham

TIME 1435

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

[illegible]

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION      Class 2 Landfill

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06FDATE 6/08/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent Burnham

TIME 1440

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.92</u> 4.0	0.0-0.5 (1500)	0.0-0.25 FT, (ML) CLAYEY SILT; brown, loose, organic material; very dry.
					0.25-1.0 FT, (CL) SILTY CLAY, some fine-medium grain gravel (<10%); organics; brown; dry, stiff.
				0.5-2.0 (1500)	1.0-4.0 FT, (CH) CLAY; dark brown, white mottling; dry, stiff.
				2.0-4.0 (1500)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION      Class 2 Landfill

REVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06G

DATE 07/29/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent Burnham

TIME 0732

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.95</u> 4.0	0.0-0.5 (0745)	0.0-1.0 FT, (CH) CLAY with some silt; dark brown, white motteling; dry.
				0.5-2.0 (0745)	1.0-2.5 FT, (CH) CLAY; dark brown/black; dry, very stiff.
					1.0 FT, area of gypsum deposits (<4%).
				2.0-4.0 (0745)	2.5-4.0 FT, (CH) CLAY and GRAVEL; dark brown/black; dry, very stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION      Class 2 Landfill

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06HDATE 07/29/2015LOCATION Class 2 LandfillDRILLER SCI, Vincent BurnhamTIME 0721TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
					0-0.5 FT, GRAVEL
					0.5-4.0 FT, (CH) CLAY; dark brown; dry, very stiff.
	1	N/A	<u>4.0</u> 4.0	0.5-1.0 (0730) 1.0-2.5 (0734)  2.5-4.0 (0737)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Class 2 LandfillREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2I-06JDATE 07/29/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent BurnhamTIME 0752TOTAL DEPTH 4 FT BGSRIG Geoprobe

NO. SAMPLES 3

[illegible]

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION      Class 2 Landfill

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06KDATE 07/29/2015

LOCATION Class 2 Landfill

DRILLER SCI, Vincent BurnhamTIME 0757

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>2.0</u> 4.0	0.0-0.5 (0825)	0.0-3.5 FT, (CL/MLG) CLAY, GRAVEL and SILT; brown; very dry, loose.
					0.5-1.0 FT, (CL/MLG) CLAY, GRAVEL and SILT; brown; dry, loose.
				0.5-2.0 (0827)	1.0-4.0 FT, (CL/MLS) GRAVEL, CLAY, and SAND; brown; slightly moist, firm.
				2.0-4.0 (0850)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION Class 2 Landfill

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-C01DDATE 6/11/2015LOCATION Class 2 LandfillDRILLER SCI, Vincent BurnhamTIME 1527TOTAL DEPTH 1 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>1</u> 1.0	0.0-0.5 (1535) 0.5-1.0 (1535)	0-1.0 FT, (CH) CLAY with some gravel; brown with orange mottling; dry, stiff.
5					End of borehole at 1 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Class 2 LandfillREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-15ADATE 6/08/2015

LOCATION Crystallizer Area

DRILLER SCI, Vincent Burnham

TIME 0955

TOTAL DEPTH 6 FT BGS

RIG Geoprobe

NO. SAMPLES 4

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{3}{4.0}$	0.0-0.5 (1000)	0-6.0 FT, (CH) CLAY; dark brown, light brown, orange, & black mottling; dry, stiff.  End of borehole at 6 FT BGS
				0.5-2.0 (1000)	
				2.0-4.0 (1000)	
5	2	N/A	$\frac{2}{2.0}$	4.0-6.0 (1000)	
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Crystallizer Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-16A

DATE 6/08/2015

LOCATION Crystallizer Area

DRILLER SCI, Vincent Burnham

TIME 0915

TOTAL DEPTH 6 FT BGS

RIG Geoprobe

NO. SAMPLES 4

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<div><div>3</div><div>4.0</div></div>	0.0-0.5 (0925)	0-0.5 FT, (CL) SILTY CLAY, some gravel (<5%); brown; dry, firm.
				0.5-2.0 (0925)	0.5-4.5 FT, (CL) SILTY CLAY, some fine-medium grain gravel (<10%); organics; brown; dry, stiff.
				2.0-4.0 (0925)	
	2	N/A	<div><div>1.8</div><div>2.0</div></div>	4.0-6.0 (0925)	4.5-5.0 FT, (GC/ML) CLAYEY GRAVEL and some SILT;brown, dry, hard.
					5.0-6.0 FT, (CH) CLAY; dark brown, orange motteling; dry, firm.
					End of borehole at 6 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Crystallizer Area

REVIEWED BY JW





LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-16CDATE 6/08/2015LOCATION Crystallizer AreaDRILLER SCI, Vincent BurnhamTIME 1352TOTAL DEPTH 6 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	$\frac{3}{4.0}$	2.0-4.0 (1355)	0-0.5 FT, (CL) SILTY CLAY; brown; very dry, hard.
					0.5-6.0 FT, (CL) SILTY CLAY, dark brown; dry, firm.
	2	N/A	$\frac{1.4}{2.0}$	4.0-6.0 (1357)	
10					
15					
					End of borehole at 6 FT BGS

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Crystallizer AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-16DDATE 07/27/2015LOCATION Crystallizer AreaDRILLER SCI, Vincent BurnhamTIME 0951TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 4

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<u>4.0</u> 4.0	0.0-0.5 (0958)	0.0-6.0 FT, (CH) CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1000)	
				2.0-4.0 (1003)	
	2	N/A	<u>2.0</u> 2.0	4.0-6.0 (1005)	End of borehole at 6 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Crystallizer AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-FFTA-08A

DATE 6/11/2015

LOCATION Former Fire Fighter Training Area

DRILLER SCI, Vincent Burnham

TIME 1020

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{4}{4.0}$	0.0-0.5 (1035)	0-1.0 FT, (CL) SILTY CLAY, some gravel; organics; brown; moist, soft.
				0.5-2.0 (1035)	1.0-3.0 FT, (CHG) CLAY and GRAVEL; tan/brown with orange and grey mottling; dry, stiff.
				2.0-4.0 (1035)	3.0-4.0 FT, (CH) CLAY; tan/orange with grey mottling; dry, stiff.
	5				End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Former Fire Fighter Training Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-MW-17CDATE 6/10/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 1243TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>2.8</u> 4.0	0.0-0.5 (1305)	0-4.0 FT, (CL) SILTY CLAY; dark brown, organics and ferrous nodules; dry, stiff, hard.
				0.5-2.0 (1305)	
				2.0-4.0 (1305)	
5					End of borehole at 4 FT BGS.
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-MW-17DDATE 6/10/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 1253TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<u>2.8</u> 4.0	0-0.75 FT, (CL) SILTY CLAY with some gravel; brown; dry, hard.	
				0.75-4.0 FT, (CL) SILTY CLAY; dark brown; dry, stiff.	
				2.0-4.0 (1310)	
10					End of borehole at 4 FT BGS.
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-NDA-11

DATE 6/11/2015

LOCATION North Disposal Area

DRILLER SCI, Vincent BurnhamTIME 0902

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.2</u> 4.0	0.0-0.5 (0925)	0-0.5 FT, (CL) SILTY CLAY with organics; brown; slightly moist, firm.
				0.5-2.0 (0925)	0.5-4.0 FT, (CH) CLAY with some gravel; dark brown; slightly moist, stiff.
				2.0-4.0 (0925)	
				5	
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION North Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-NDA-12DATE 6/11/2015

LOCATION North Disposal Area

DRILLER SCI, Vincent Burnham

TIME 1040

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS	
	1	N/A	<div><div>2.8</div><div>4.0</div></div>	0.0-0.5 (1110)	0-0.5 FT, (CH) CLAY, some gravel and organics; dark brown; dry, stiff.	
				0.5-2.0 (1110)	0.5-4.0 FT, (CH) CLAY, some gravel; dark brown/black; dry, stiff.	
					2.0-4.0 (1110)	
5					End of borehole at 4 FT BGS	

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION North Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-NDA-13DATE 6/11/2015

LOCATION North Disposal Area

DRILLER SCI, Vincent Burnham

TIME 0955

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
<div>0</div> <div>5</div> <div>10</div> <div>15</div>	1	N/A	<div>2.8</div> <div>4.0</div>	0.0-0.5 (1000)	0-0.5 FT, (CH) CLAY; brown; moist, soft.
				0.5-2.0 (1000)	0.5-1.5 FT, (CH) CLAY; tan orange mottling; dry, firm.
					1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.
					2.0-3.5 FT, (CH) CLAY; tan; dry, firm.
					3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.
				2.0-4.0 (1000)	3.75-4.0 FT, (CH) CLAY; tan; dry, firm.
		End of borehole at 4 FT BGS			

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION North Disposal Area

REVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16ADATE 6/10/2015

LOCATION Stewart Creek Corridor

DRILLER SCI, Vincent Burnham

TIME 0930

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
<div>0</div> <div>5</div> <div>10</div> <div>15</div>	1	N/A	<div><u>3.8</u> 4.0</div>	0.0-0.5 (0935)	0-0.5 FT, (CL) SILTY CLAY; dark brown; organics; dry, firm.
				0.5-2.0 (0935)	0.5-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
				2.0-4.0 (0935)	
					End of borehole at 4 FT BGS

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Stewart Creek Corridor

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16BDATE 6/10/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 0958TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.6</u> 4.0	0.0-0.5 (1005)	0-0.75 FT, (CL) SILTY CLAY; dark brown with orange and light brown mottling; organics; very dry, hard.
				0.5-2.0 (1005)	0.75-4.0 FT, (CH) CLAY with some gravel; dark brown with orange mottling; dry, very stiff.
				2.0-4.0 (1005)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16C

DATE 6/10/2015

LOCATION Stewart Creek Corridor

DRILLER SCI, Vincent Burnham

TIME 0946

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>2</u> 4.0	0.0-0.5 (0955)	0-0.5 FT, (CL) SILTY CLAY; brown, organics; very dry, firm.
					0.5-4.0 FT, (CH) CLAY; dark brown, ferrous nodules; dry, stiff.
				0.5-2.0 (0955)	
				2.0-4.0 (0955)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Stewart Creek Corridor

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16DDATE 6/10/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 0940TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
					0-0.25 FT, (CL) SILTY CLAY; brown; organics; dry, firm.
					0.25-4.0 FT, (CH) CLAY; dark brown with light grey mottling; dry, stiff.
	1	N/A	<u>3.4</u> 4.0	0.5-2.0 (0945)	
				2.0-4.0 (0945)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16EDATE 07/27/2015

LOCATION Stewart Creek Corridor

DRILLER SCI, Vincent Burnham

TIME 0900

TOTAL DEPTH 4 FT BGSRIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<div> <div>4.0</div> <div>4.0</div> </div>	0.0-0.5 (0912)	0-0.5 FT, (CH) CLAY; dark brown; mostly dry, firm.
					0.5-0.75 FT, (CLG) SILTY CLAY and GRAVEL; grey; very dry, loose.
				0.5-2.0 (0914)	0.75-4.0 FT, (CH) CLAY; dark brown/black; mostly dry, firm
				2.0-4.0 (0916)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION Stewart Creek Corridor

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16F

DATE 07/27/2015

LOCATION Stewart Creek Corridor

DRILLER SCI, Vincent Burnham

TIME 0911

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.95</u> 4.0	0.0-0.5 (0925)	0-0.5 FT, (CH) CLAY, organics; dark brown; dry, firm.
				0.5-2.0 (0927)	0.5-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
				2.0-4.0 (0929)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION Stewart Creek Corridor

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16GDATE 07/27/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 0840TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<u>4.0</u> 4.0	0.0-0.5 (1000)	0-0.5 FT, (CL) SILTY CLAY; brown; very dry, hard.
					0.5-1.0 FT, (CH) CLAY; red; very dry, hard.
				0.5-2.0 (1003)	1.0-4.0 FT, (CH) CLAY; brown with grey mottling; stiff, dry.
					2.0-3.0 with some sand.
				2.0-4.0 (1005)	
10					End of borehole at 4 FT BGS
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SDA-3C

DATE 6/09/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent BurnhamTIME 0939

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.6</u> 4.0	0.0-0.5 (0945)	0-0.5 FT, (ML) CLAYEY SILT, oragnics; brown; dry, firm.
				0.5-2.0 (0945)	0.5-4.0 FT, (CL) SILTY CLAY; dark brown; dry, firm.
				2.0-4.0 (0945)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION      South Disposal Area

REVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-STB-6ADATE 6/09/2015

LOCATION Slag Treatment Building DRILLER SCI, Vincent Burnham TIME 1357

TOTAL DEPTH 8 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS	
5	1	4.7   2.1	<u>3.4</u> 4.0	1.0-2.0 (1405)	0-1.0 FT, Concrete.	
					1.0-1.25 FT, FILL - (GP/SP) SAND, coarse, and GRAVEL, fine; dark black; slightly wet, loose, soft.	
					1.25-1.5 FT, (CL) SILTY CLAY and gravel; dark brown; slightly wet, soft.	
					1.5-5.0 FT, (CH) CLAY; dark brown with black mottling; dry, stiff.	
	2	4.6  200	<u>1.6</u> 4.0	4.0-6.0 (1405)	5.0-8.0 FT, (CH) CLAY; dark brown; dry, stiff.	
					6.0-8.0 (1405)	
10					End of borehole at 8.0 FT BGS	
15						

PROJECT No 130-2086 LOGGED BY AM

PROJECT Exide Frisco CHECKED BY JX

LOCATION	Slag Treatment Building	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-STB-6BDATE 6/09/2015LOCATION Slag Treatment BuildingDRILLER SCI, Vincent BurnhamTIME 1638TOTAL DEPTH 8 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	3.7	<u>3.6</u> 4.0	1.0-2.0 (1450)	0-1.0 FT, Concrete.
					1-2.5 FT, (CL) SILTY CLAY and gravel; dark brown; wet, soft.
		4.5		2.0-4.0 (1450)	2.5-8.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
	2	6.0	<u>3.8</u> 4.0	4.0-6.0 (1450)	
10		5.0			
15					End of borehole at 8.0 FT BGS

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Slag Treatment BuildingREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-STB-6C

DATE 6/09/2015

LOCATION Slag Treatment Building DRILLER SCI, Vincent Burnham TIME 1425

TOTAL DEPTH 8 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	10.1	<u>3</u> 4.0	0.75-2.0 (1435)	0-0.75 FT, Concrete.
					0.75-1.25 FT, (ML) CLAYEY SILT; red with black mottling; slightly moist, soft.
		7.2		2.0-4.0 (1435)	1.25-1.3 FT, (CL) CLAY and GRAVEL; black, dry, thick/firm.
					1.3-2.0 FT, (ML) SILT; light grey/white; dry, loose.
	2	5.8	<u>3.6</u> 4.0	4.0-6.0 (1438)	2.0-4.0 FT, (CL) CLAY; dark brown; dry, stiff.
					4.0-5.0 FT, (CL) CLAY, with some gravel, dark brown and light brown; slightly wet, stiff.
					5.0-8.0 FT, (CL) CLAY, dark brown; dry, stiff.
10					End of borehole at 8 FT BGS
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	JX
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LOCATION	Slag Treatment Building	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-ADATE 6/08/2015LOCATION South Disposal AreaDRILLER SCI, Vincent BurnhamTIME 1240TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{4}{4.0}$	0.0-0.5 (1255)	0.0-4 FT, (CL) SILTY CLAY, dark brown/black, some light brown mottling; dry, firm.
				0.5-2.0 (1255)	
				2.0-4.0 (1255)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION South Disposal AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-BDATE 6/08/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent BurnhamTIME 1248

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
0-  5          10          15	1	N/A	<div><div>4</div><div>4.0</div></div>	0.0-0.5 (1300)	0-0.5 FT, (CL) SILTY CLAY, dark brown; very dry, hard.
				0.5-2.0 (1300)	0.5-4.0 FT, (CL) SILTY CLAY, dark brown; dry, firm.
				2.0-4.0 (1300)	
					End of borehole at 4 FT BGS

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION South Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-CDATE 6/08/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent Burnham

TIME 1255

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.8</u> 4.0	0.0-0.5 (1310)	0-0.5 FT, (ML) CLAYEY SILT, organics; dark brown; dry, stiff.
				0.5-2.0 (1310)	0.5-4.0 FT, (CL) SILTY CLAY, trace fine grain gravel (<3%), brown; dry, firm.
				2.0-4.0 (1310)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION            South Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-D

DATE 07/27/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent Burnham

TIME 0800

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<div>3.9</div> <div>4.0</div>	0.0-0.5 (0810)	0-2.0 FT, (CH) CLAY; dark brown, some orange/ferrous mottling; dry, stiff, stiff-hard.
				0.5-2.0 (0812)	
				2.0-4.0 (0814)	
				5	
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION South Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE D-11CDATE 6/10/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent Burnham TIME 1340TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{4}{4.0}$	0.5-2.0 (1345)  2.0-4.0 (1345)	0-4.0 FT, (CH) CLAY; dark brown/black; trace amounts of gravel (<2%), dry, very stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AMPROJECT Exide Frisco CHECKED BY JXLOCATION North Tributary Corridor and North Wooded Area REVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE D-11DDATE 6/10/2015

LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent Burnham TIME 1350

TIME 1350

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>0.75</u> 4.0	0.0-0.5 (1355)	0-0.5 FT, (CL) SILTY CLAY; light brown; slightly moist, soft.
				0.5-2.0 (1355)	0.5-4.0 FT, (CH) CLAY with some silt; dark brownwith black mottling; dry, firm.
				2.0-4.0 (1355)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	JX
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LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE D-11EDATE 6/10/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent BurnhamTIME 1332TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{4}{4.0}$	0.0-0.5 (1340)	0-0.25 FT, (CL) SILTY CLAY; brown; organics; very dry, hard.
				0.5-2.0 (1340)	0.5-4.0 FT, (CH) CLAY with some gravel; dark brown; dry, stiff.
				2.0-4.0 (1340)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION North Tributary Corridor and North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE D-11FDATE 07/29/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 0840

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>4.0</u> 4.0	0.0-0.5 (0855)	0-0.75 FT, (CL) SILTY CLAY; dark brown; organics, dry, firm.
				0.5-2.0 (0857)	0.75-2.5 FT, (CH) CLAY with trace gravel; dark brown/black; dry, stiff.
				2.0-4.0 (0900)	2.5-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black with some orange mottling, gypsum deposits; dry, stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE E-11C-BDATE 6/10/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent BurnhamTIME 1401TOTAL DEPTH 8 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
					0-0.25 FT, (CL) SILTY CLAY; brown; organics; very dry, hard. 0.5-6.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
	1	N/A	<u>3.4</u> 4.0	0.0-0.5 (1410)	
5				0.5-2.0 (1410)	
	2	N/A	<u>4</u> 4.0	2.0-4.0 (1410)	6.0-7.0 FT, (CH) GRAVELLY CLAY; brown; dry, very stiff. 7.0-8.0 FT, (CH) GRAVELLY CLAY; light brown with dark brown mottling; dry, stiff.
10					End of borehole at 8 FT BGS
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION North Tributary Corridor and North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE E-11C-CDATE 6/10/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent BurnhamTIME 1384TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.4</u> 4.0	0.0-0.5 (1440)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
				0.5-2.0 (1440)	
				2.0-4.0 (1440)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION North Tributary Corridor and North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE E-11C-DDATE 6/10/2015

LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent Burnham TIME 1323

TIME 1323

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>2.4</u> 4.0	0.0-0.5 (1430)	0-2.0 FT, (CH) CLAY with some silt; dark brown/black; mostly dry, soft.
				0.5-2.0 (1430)	
				2.0-4.0 (1430)	2.0-4.0 FT, (CH) CLAY; dark brown with black mottling; dry, stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	JX
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LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE E-15BDATE 07/29/2015LOCATION N Tributary Corridor & N Wooded Area DRILLER SCI, Vincent Burnham TIME 1510TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.95</u> 4.0	0.0-0.5 (1515)	0-0.5 FT, (CL) SILTY CLAY with some gravel; dark brown; very dry, hard.
				0.5-2.0 (1517)	0.5-4 FT, (CL) GRAVELLY SILTY CLAY; brown; loose, dry, hard.
				2.0-4.0 (1520)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AMPROJECT Exide Frisco CHECKED BY EPWLOCATION N Tributary Corridor & N Wooded Area REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11ADATE 6/11/2015LOCATION N Tributary Corridor & N Wooded Area DRILLER SCI, Vincent Burnham TIME 1400TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.2</u> 4.0	0.0-0.5 (1410)	0-1.0 FT, (CH) CLAY; dark brown; dry, soft.
				0.5-2.0 (1410)	1.0-4.0 FT, (CH) CLAY; dark brown, black mottling; dry, firm.
				2.0-4.0 (1410)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AMPROJECT Exide Frisco CHECKED BY JXLOCATION N Tributary Corridor & N Wooded Area REVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11BDATE 6/11/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent BurnhamTIME 1431TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>2.8</u> 4.0	0.0-0.5 (1435)	0-4.0 FT, (CL) SILTY CLAY with organics; dark brown/black, dry, soft.
				0.5-2.0 (1435)	
				2.0-4.0 (1435)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION North Tributary Corridor and North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11CDATE 6/11/2015LOCATION North Tributary Corridor and North Wooded Area DRILLER SCI, Vincent BurnhamTIME 1419TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	$\frac{3}{4.0}$	0.0-0.5 (1425)	0-0.25 FT (ML) CLAYEY SILT; brown; slightly moist, soft.
				0.25-2.0 FT, (CH) CLAY; dark brown; dry, firm.	
				0.5-2.0 (1425)	
				2.0-2.25 FT, (CH) CLAY and GRAVEL; gray and reddish brown; moist, stiff-hard.	
10				2.25-4.0 FT, (CH) CLAY; dark brown; dry, firm.	
				2.0-4.0 (1425)	
15					End of borehole at 4 FT BGS

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION North Tributary Corridor and North Wooded AreaREVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-13DATE 07/28/2015LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent BurnhamTIME 0742TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.8</u> 4.0	0.0-0.5 (0746)	0-0.75 FT (ML) CLAYEY SILT with organics; brown; dry, loose, soft.
				0.5-2.0 (0750)	0.75-4.0 FT, (CL) CLAY with some silt; dark brown with tan mottling; dry, stiff.
				2.0-4.0 (0752)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION North Tributary Corridor & North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-14DATE 07/28/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 0757

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

[illegible]

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-15DATE 07/28/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 0940

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.75</u> 4.0	0.0-0.5 (0945)	0-1.0 FT (ML) CLAYEY SILT; dark brown; loose, dry, hard.
				0.5-2.0 (0947)	1.0-2.5 FT, (CL) SILTY CLAY; dark brown; dry, hard-stiff.
				2.0-4.0 (0950)	2.5-4.0 FT, (CL) CLAY with some silt; dark brown/black; dry, soft.
				End of borehole at 4 FT BGS	
5					
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-16DATE 07/28/2015LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent BurnhamTIME 0959TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.75</u> 4.0	0.0-0.5 (1005)	0-2.5 FT, (CL) SILTY CLAY; dark brown; very dry, hard, firm.
				0.5-2.0 (1008)	
				2.0-4.0 (1010)	2.5-4.0 FT, (CL) GRAVELLY SILTY CLAY; brown; dry, hard, firm.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION North Tributary Corridor & North Wooded AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-17DATE 07/28/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 1229

TOTAL DEPTH 4 FT BGS RIG Hand Auger NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>NA</u> 4.0	0.0-0.5 (1230)	0-2.0 FT, (ML) SILT with some clay; dark brown; very dry, hard, firm.
				0.5-2.0 (1240)	1.75-2.0 FT area of gravel and silt (friable sandstone).
					2.0-4.0 FT, (CL) SILTY CLAY and some gravel; dark brown/black; dry, stiff.
				2.0-4.0 (1250)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-18DATE 07/27/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 1325

TOTAL DEPTH 3.5 FT BGS RIG Geoprobe NO. SAMPLES 3

[illegible]

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-19DATE 07/28/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 1037

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.85</u> 4.0	0.0-0.5 (1045)	0-0.5 FT, (ML) CLAYEY SILT; brown; dry, hard, loose.
				0.5-2.0 (1047)	0.5-2.5 FT, (CL) CLAY with some silt; dark brown; dry, stiff.
				2.0-4.0 (1050)	2.5-4.0 FT, (CL) CLAY; dark brown; mostly dry, stiff.
				End of borehole at 4 FT BGS	
5					
10					
15					

PROJECT No 130-2086 LOGGED BY AM

PROJECT	Exide Frisco	CHECKED BY	EPW
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LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW
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LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-5-ADATE 6/10/2015LOCATION South Disposal AreaDRILLER SCI, Vincent BurnhamTIME 1033TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<u>2.8</u> 4.0	0.0-0.5 (1040)	0-0.5 FT, (CL) SILTY CLAY and organics; dark brown; dry, firm.
				0.5-2.0 (1040)	0.5-4.0 FT, (CH) CLAY some gravel; brown; slightly moist, stiff.
				2.0-4.0 (1040)	
					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION South Disposal AreaREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-8C

DATE 6/09/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent Burnham

TIME 0947

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.2</u> 4.0	0.0-0.5 (0955)	0-0.5 FT, (CL) SILTY CLAY; brown; dry, firm.
				0.5-2.0 (0955)	0.5-2.0 FT, (CH) CLAY with some silt; dark brown; dry, firm.
				2.0-4.0 (0955)	2.0-4.0 FT, (CL) SILTY CLAY and GRAVEL; reddish brown; dry, firm.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION            South Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-8D

DATE 6/09/2015

LOCATION South Disposal Area

DRILLER SCI, Vincent Burnham

TIME 0953

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>1.6</u> 4.0	0.0-0.5 (1055)	0-0.5 FT, (CL) SILTY CLAY; dark brown; organics, dry, firm.
				0.5-2.0 (1055)	0.5-4.0 FT, (CH) CLAY; some fine grain gravel (<5%), dark brown; dry, stiff.
				2.0-4.0 (1055)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION            South Disposal Area

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4ADATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1333TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.95</u> 4.0	0-0.5 (1340)	0-0.25 FT organics. 0-4.0 FT, (CL) CLAY; dark brown/black; dry, stiff.
				0.5-2.0 (1342)	
				2.0-4.0 (1346)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4BDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1328TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.85</u> 4.0	0.0-0.5 (1338)	0-0.25 organics.
				0.5-2.0 (1340)	0-4.0 FT, (CL) CLAY; dark brown/black with significant orange ferrous mottling; dry, very stiff.
				2.0-4.0 (1342)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4CDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1321TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.90</u> 4.0	0.0-0.5 (1327)	0-0.25 FT, organics
				0.5-2.0 (1331)	0-4.0 FT, (CL) CLAY; dark brown/black; dry, very stiff.
					2.0-4.0 FT, orange ferrous mottling
				2.0-4.0 (1337)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4DDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1315TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.90</u> 4.0	0.0-0.5 (1327)	0-0.25 organics
				0.5-2.0 (1329)	0-2.0 FT, Orange ferrous mottling
				2.0-4.0 (1330)	0-4.0 FT, (CL) CLAY; dark brown/black; dry, stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4EDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1310TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	<u>3.85</u> 4.0	0.5-2.0 (1320)  2.0-4.0 (1322)	0-4.0 FT, (CL) CLAY; dark brown/black with orange ferrous mottling; dry, very stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5ADATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1100TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.25</u> 4.0	0.0-0.5 (1112)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1119)	
				2.0-4.0 (1120)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5BDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1039TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.95</u> 4.0	0.0-0.5 (1044)	0-0.5 FT, organics.
				0.5-2.0 (1046)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
				2.0-4.0 (1048)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5CDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1043TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>4.0</u> 4.0	0.0-0.5 (1100)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1103)	
				2.0-4.0 (1105)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5DDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1054TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.0</u> 4.0	0.0-0.5 (1111)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1115)	
				2.0-4.0 (1117)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6ADATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1334TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.5</u> 4.0	0.0-0.5 (1443)	0-0.2 FT, organics 0-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1447)	
				2.0-4.0 (1450)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6BDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1340TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.8</u> 4.0	0.0-0.5 (1450)	0-0.2 FT, organics.
				0.5-2.0 (1452)	0-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black; dry, very stiff.
				2.0-4.0 (1454)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6C

DATE 07/27/2015

LOCATION Lake Parcel

DRILLER SCI, Vincent Burnham

TIME 1420

TOTAL DEPTH 4 FT BGS

RIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>3.95</u> 4.0	0.0-0.5 (1428)	0-0.2 FT, organics
				0.5-2.0 (1430)	0-2.0 FT, (CH) CLAY; brown with orange, black, and grey mottling; dry, stiff.
				2.0-4.0 (1432)	2.0-4.0 FT, (CH) CLAY; dark brown/black with orange ferrous mottling; stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY      AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION Lake Parcel

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6DDATE 07/27/2015LOCATION Lake ParcelDRILLER SCI, Vincent BurnhamTIME 1426TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	NA	<u>2.0</u> <u>4.0</u>	0.5-2.0 (1434)  2.0-4.0 (1436)	0-2.0 FT, (CH) CLAY with organics; brown with orange, black, and grey mottling; dry, stiff. 0.5-0.75 FT, (CH) CLAY, organics, brown with orange mottling; dry. 0.75-4.0 FT, (CH) CLAY; dark brown/black, dry, stiff.
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY EPWLOCATION Lake ParcelREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE SCC-5CDATE 6/10/2015LOCATION Stewart Creek CorridorDRILLER SCI, Vincent BurnhamTIME 1017TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
					0-0.5 FT, (ML) CLAYEY SILT with some gravel and organics; brown; very dry, hard.
				0.5-2.0 (1025)	0.5-4.0 FT, (CH) CLAY, some gravel, ferrous nodules, and organics; brown with some orange mottling; dry, stiff.
	1	N/A	<u>2.4</u> 4.0	2.0-4.0 (1025)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Stewart Creek CorridorREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE SCC-5DDATE 07/27/2015

LOCATION Stewart Creek Corridor

DRILLER SCI, Vincent BurnhamTIME 0740

TOTAL DEPTH 6 FT BGS

RIG Geoprobe

NO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
5	1	N/A	<u>3.75</u> 4.0	2.0-4.0 (0745)	0-1.0 FT, (ML) CLAYEY SILT with organics; brown; loose, very dry.
					1.0-4.0 FT, (CH) CLAY with trace gravel; brown with some orange ferrous mottling; dry, stiff.
	2	N/A	<u>2.0</u> 2.0	4.0-6.0 (0750)	4.0-6.0 FT, (CH) CLAY with trace gravel; brown with some orange ferrous mottling; slightly moist, stiff.
10					End of borehole at 6 FT BGS
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY      EPW

LOCATION Stewart Creek Corridor

REVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE SRB-VS-3ADATE 6/08/2015LOCATION Shooting Range Berm & South BermDRILLER SCI, Vincent BurnhamTIME 1230TOTAL DEPTH 4 FT BGSRIG GeoprobeNO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
	1	N/A	$\frac{3}{4.0}$	0.0-0.5 (1230)	0-2.0 FT, (CL) SILTY CLAY; grey/brown with orange mottling; dry, firm.
				0.5-2.0 (1230)	
				2.0-2.25 FT, (CL) SILTY CLAY; grey with black and orange ferrous nodules; dry, firm.	
				2.25-4.0 FT, (CL) SILTY CLAY; grey/brown with orange mottling; dry, firm.	
				2.0-4.0 (1230)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086LOGGED BY AMPROJECT Exide FriscoCHECKED BY JXLOCATION Shooting Range Berm & South BermREVIEWED BY JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE SRB-VS-7ADATE 6/08/2015

LOCATION Shooting Range Berm & South Berm

DRILLER SCI, Vincent Burnham

TIME 1030

TOTAL DEPTH 4 FT BGS

RIG Geoprobe

NO. SAMPLES 3

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
0-5	1	N/A	<u>3.8</u> 4.0	0.0-0.5 (1045)	0-0.5 FT, (CL) SILTY CLAY; orange/brown; very dry, hard.
					0.5-2.0 FT, (CH) CLAY; orange/brown; dry, firm.
				0.5-2.0 (1045)	
					2.0-2.25 FT, (CL) SILTY CLAY; red/brown; dry, stiff.
					2.25-4.0 FT, (CH) CLAY; orange brown with some light grey mottling; dry, firm.
				2.0-4.0 (1045)	
5					End of borehole at 4 FT BGS
10					
15					

PROJECT No 130-2086

LOGGED BY AM

PROJECT Exide Frisco

CHECKED BY JX

LOCATION Shooting Range Berm & South Berm

REVIEWED BY JW



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## Appendix B

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### APPENDIX B

#### Soil Sample Location Coordinates

**Coordinate Data Summary  
2015 Soil Sample Locations**

Location ID	Northing	Easting
<b>Soil Sample Locations</b>		
2014-CUFT-19 (0-0.5)	2478559	7101988
2014-SCC-16 (0-0.5)	2479876	7101807
2015-C2L-06D (0-0.5)	2480058	7103441
2015-C2L-06E (0-0.5)	2480099	7103138
2015-C2L-06F (0-0.5)	2480094	7103212
2015-C2L-06G (0-0.5)	2480065	7103516
2015-C2L-06H (0.5-1)	2480013	7103456
2015-C2L-06J (0-0.5)	2480068	7103213
2015-C2L-06K (0-0.5)	2480066	7103140
2015-C2L-C01D (0-0.5)	2480284	7103202
2015-CUFT-15A (0-0.5)	2478863	7101978
2015-CUFT-16A (0-0.5)	2478656	7101959
2015-CUFT-16B (0.5-2)	2478764	7101980
2015-CUFT-16B (0-0.5)	2478764	7101980
2015-CUFT-16C (2-4)	2478763	7101953
2015-CUFT-16D (0-0.5)	2478764	7102021
2015-FFTA-08A (0-0.5)	2480596	7102511
2015-FWCS-5A (0-0.5)	2479883	7101869
2015-FWCS-6A (0-0.5)	2479940	7101825
2015-FWCS-7A (0-0.5)	2479966	7101803
2015-MW-17C (0-0.5)	2479593	7102081
2015-MW-17D (0.5-2)	2479608	7102074
2015-MW-17D (2-4)	2479608	7102074
2015-NDA-11 (0-0.5)	2480197	7102397
2015-NDA-12 (0-0.5)	2480343	7102436
2015-NDA-13 (0-0.5)	2480456	7102465
2015-SCC-16A (0-0.5)	2479860	7101821
2015-SCC-16B (0.5-2)	2479891	7101795
2015-SCC-16B (0-0.5)	2479891	7101795
2015-SCC-16C (0-0.5)	2479871	7101806
2015-SCC-16D (0.5-2)	2479879	7101810
2015-SCC-16E (0-0.5)	2479822	7101856
2015-SCC-16F (0-0.5)	2479946	7101749
2015-SCC-16G (0-0.5)	2479854	7101755
2015-SDA-3C (0-0.5)	2480339	7101624
2015-STB-6A (1-2)	2480092	7101791
2015-STB-6A (4-6)	2480092	7101791
2015-STB-6A (6-8)	2480092	7101791
2015-STB-6B (1-2)	2480012	7101811
2015-STB-6C (0.75-2)	2480060	7101754
B3RA-A (0-0.5)	2479910	7101515
B3RA-B (0-0.5)	2479966	7101571
B3RA-C (0-0.5)	2480006	7101526
B3RA-D (0-0.5)	2479893	7101577
D-11C (0.5-2)	2480132	7102970
D-11C (2-4)	2480132	7102970
D-11D (0-0.5)	2480180	7102963



**Coordinate Data Summary  
2015 Soil Sample Locations**

Location ID	Northing	Easting
<b>Soil Sample Locations</b>		
D-11E (0-0.5)	2480089	7102976
D-11F (0-0.5)	2480070	7102985
E-11C-B (2-4)	2480056	7102809
E-11C-C (0-0.5)	2480077	7102893
E-11C-D (0-0.5)	2480046	7102739
E-15B (0-0.5)	2480939	7102806
ECO-11A (0-0.5)	2480108	7102502
ECO-11B (0-0.5)	2480171	7102584
ECO-11C (0-0.5)	2480267	7102541
ECO-11C (0.5-2)	2480267	7102541
ECO-11D (0-0.5)	2480412	7102599
ECO-13 (0-0.5)	2480092	7102605
ECO-14 (0-0.5)	2480221	7102485
ECO-15 (0-0.5)	2480335	7102626
ECO-16 (0-0.5)	2480364	7102529
ECO-17 (0-0.5)	2480541	7102636
ECO-18 (0-0.5)	2480714	7102568
ECO-19 (0-0.5)	2480203	7102609
ECO-5-A (0-0.5)	2480750	7101433
ECO-8C (0-0.5)	2480459	7101611
ECO-8D (0-0.5)	2480575	7101592
F-4A (0-0.5)	2478706	7102554
F-4B (0-0.5)	2478790	7102496
F-4C (0-0.5)	2478704	7102434
F-4D (0-0.5)	2478638	7102501
F-4E (0.5-2)	2478704	7102501
G-5A (0-0.5)	2478854	7102374
G-5B (0-0.5)	2478918	7102311
G-5C (0-0.5)	2478858	7102256
G-5D (0-0.5)	2478796	7102317
G-6A (0-0.5)	2479007	7102376
G-6B (0-0.5)	2479066	7102315
G-6C (0-0.5)	2479008	7102259
G-6D (0.5-2)	2479005	7102316
SCC-5C (0.5-2)	2480076	7101654
SCC-5C (0-0.5)	2480076	7101654
SCC-5D (2-4)	2480080	7101653
SRB-VS-3A (0-0.5)	2479963	7101250
SRB-VS-7A (0-0.5)	2479905	7101249

## Notes:

1. Coordinate System: Texas State Plane North Central Zone, NAD 83, units in feet.



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## Appendix C

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### APPENDIX C

#### Laboratory Analytical Data and Data Usability Summaries



# Texas Commission on Environmental Quality

## NELAP - Recognized Laboratory Fields of Accreditation



TestAmerica Laboratories, Inc. - Houston

6310 Rothway Drive  
Houston, TX 77040-5056

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Issue Date: 7/7/2015

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### Matrix: *Non-Potable Water*

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**Method** EPA 1010

Analyte	AB	Analyte ID	Method ID
Ignitability	TX	1780	10116606

**Method** EPA 1311

Analyte	AB	Analyte ID	Method ID
TCLP	TX	849	10118806

**Method** EPA 1312

Analyte	AB	Analyte ID	Method ID
SPLP	TX	850	10119003

**Method** EPA 160.4

Analyte	AB	Analyte ID	Method ID
Residue-volatile	TX	1970	10010409

**Method** EPA 1664

Analyte	AB	Analyte ID	Method ID
n-Hexane Extractable Material (HEM) (O&G)	TX	1803	10127807
Silica Gel Treated n-Hexane Extractable Material (SGT-HEM)	TX	10220	10127807

**Method** EPA 180.1

Analyte	AB	Analyte ID	Method ID
Turbidity	TX	2055	10011606

**Method** EPA 200.7

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10013806
Antimony	TX	1005	10013806
Arsenic	TX	1010	10013806
Barium	TX	1015	10013806
Beryllium	TX	1020	10013806
Boron	TX	1025	10013806
Cadmium	TX	1030	10013806
Calcium	TX	1035	10013806
Chromium	TX	1040	10013806
Cobalt	TX	1050	10013806



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### Matrix: *Non-Potable Water*

Copper	TX	1055	10013806
Iron	TX	1070	10013806
Lead	TX	1075	10013806
Lithium	TX	1080	10013806
Magnesium	TX	1085	10013806
Manganese	TX	1090	10013806
Molybdenum	TX	1100	10013806
Nickel	TX	1105	10013806
Potassium	TX	1125	10013806
Selenium	TX	1140	10013806
Silica as SiO <sub>2</sub>	TX	1990	10013806
Silver	TX	1150	10013806
Sodium	TX	1155	10013806
Strontium	TX	1160	10013806
Thallium	TX	1165	10013806
Tin	TX	1175	10013806
Titanium	TX	1180	10013806
Vanadium	TX	1185	10013806
Zinc	TX	1190	10013806

### Method EPA 245.1

Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10036609

### Method EPA 300.0

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10053006
Chloride	TX	1575	10053006
Fluoride	TX	1730	10053006
Nitrate as N	TX	1810	10053006
Nitrate-nitrite	TX	1820	10053006
Nitrite as N	TX	1840	10053006
Sulfate	TX	2000	10053006



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### Matrix: *Non-Potable Water*

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**Method** EPA 335.1

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	10060001

**Method** EPA 335.4

Analyte	AB	Analyte ID	Method ID
Total cyanide	TX	1645	10061402

**Method** EPA 350.1

Analyte	AB	Analyte ID	Method ID
Ammonia as N	TX	1515	10063408

**Method** EPA 351.2

Analyte	AB	Analyte ID	Method ID
Kjeldahl nitrogen - total (TKN)	TX	1795	10065200

**Method** EPA 353.2

Analyte	AB	Analyte ID	Method ID
Nitrate as N	TX	1810	10067400
Nitrate-nitrite	TX	1820	10067400

**Method** EPA 420.4

Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10080203

**Method** EPA 6010

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10155609
Antimony	TX	1005	10155609
Arsenic	TX	1010	10155609
Barium	TX	1015	10155609
Beryllium	TX	1020	10155609
Boron	TX	1025	10155609
Cadmium	TX	1030	10155609
Calcium	TX	1035	10155609
Chromium	TX	1040	10155609
Cobalt	TX	1050	10155609



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### Matrix: *Non-Potable Water*

Copper	TX	1055	10155609
Iron	TX	1070	10155609
Lead	TX	1075	10155609
Lithium	TX	1080	10155609
Magnesium	TX	1085	10155609
Manganese	TX	1090	10155609
Molybdenum	TX	1100	10155609
Nickel	TX	1105	10155609
Potassium	TX	1125	10155609
Selenium	TX	1140	10155609
Silica as SiO <sub>2</sub>	TX	1990	10155609
Silver	TX	1150	10155609
Sodium	TX	1155	10155609
Strontium	TX	1160	10155609
Thallium	TX	1165	10155609
Tin	TX	1175	10155609
Titanium	TX	1180	10155609
Vanadium	TX	1185	10155609
Zinc	TX	1190	10155609

### Method EPA 602

Analyte	AB	Analyte ID	Method ID
Benzene	TX	4375	10102202
Ethylbenzene	TX	4765	10102202
m+p-xylene	TX	5240	10102202
o-Xylene	TX	5250	10102202
Toluene	TX	5140	10102202
Xylene (total)	TX	5260	10102202

### Method EPA 608

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10103603
4,4'-DDE	TX	7360	10103603



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### Matrix: *Non-Potable Water*

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4,4'-DDT	TX	7365	10103603
Aldrin	TX	7025	10103603
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10103603
alpha-Chlordane	TX	7240	10103603
Aroclor-1016 (PCB-1016)	TX	8880	10103603
Aroclor-1221 (PCB-1221)	TX	8885	10103603
Aroclor-1232 (PCB-1232)	TX	8890	10103603
Aroclor-1242 (PCB-1242)	TX	8895	10103603
Aroclor-1248 (PCB-1248)	TX	8900	10103603
Aroclor-1254 (PCB-1254)	TX	8905	10103603
Aroclor-1260 (PCB-1260)	TX	8910	10103603
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10103603
Chlordane (tech.)	TX	7250	10103603
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10103603
Dieldrin	TX	7470	10103603
Endosulfan I	TX	7510	10103603
Endosulfan II	TX	7515	10103603
Endosulfan sulfate	TX	7520	10103603
Endrin	TX	7540	10103603
Endrin aldehyde	TX	7530	10103603
Endrin ketone	TX	7535	10103603
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10103603
gamma-Chlordane	TX	7245	10103603
Heptachlor	TX	7685	10103603
Heptachlor epoxide	TX	7690	10103603
Methoxychlor	TX	7810	10103603
Toxaphene (Chlorinated camphene)	TX	8250	10103603

### Method EPA 615

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10105609



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### Matrix: *Non-Potable Water*

2,4-D	TX	8545	10105609
2,4-DB	TX	8560	10105609
Dalapon	TX	8555	10105609
Dicamba	TX	8595	10105609
Dichloroprop (Dichlorprop, Weedone)	TX	8605	10105609
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10105609
MCPA	TX	7775	10105609
MCPP	TX	7780	10105609
Silvex (2,4,5-TP)	TX	8650	10105609

### Method EPA 624

Analyte	AB	Analyte ID	Method ID
1,1,1-Trichloroethane	TX	5160	10107207
1,1,2,2-Tetrachloroethane	TX	5110	10107207
1,1,2-Trichloroethane	TX	5165	10107207
1,1-Dichloroethane	TX	4630	10107207
1,1-Dichloroethylene	TX	4640	10107207
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10107207
1,2-Dichlorobenzene	TX	4610	10107207
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10107207
1,2-Dichloropropane	TX	4655	10107207
1,3-Dichlorobenzene	TX	4615	10107207
1,4-Dichlorobenzene	TX	4620	10107207
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10107207
2-Chloroethyl vinyl ether	TX	4500	10107207
Acetone (2-Propanone)	TX	4315	10107207
Acrolein (Propenal)	TX	4325	10107207
Acrylonitrile	TX	4340	10107207
Benzene	TX	4375	10107207
Bromodichloromethane	TX	4395	10107207
Bromoform	TX	4400	10107207





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### Matrix: *Non-Potable Water*

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Carbon tetrachloride	TX	4455	10107207
Chlorobenzene	TX	4475	10107207
Chlorodibromomethane	TX	4575	10107207
Chloroethane (Ethyl chloride)	TX	4485	10107207
Chloroform	TX	4505	10107207
cis-1,2-Dichloroethylene	TX	4645	10107207
cis-1,3-Dichloropropene	TX	4680	10107207
Ethylbenzene	TX	4765	10107207
m+p-xylene	TX	5240	10107207
Methyl bromide (Bromomethane)	TX	4950	10107207
Methyl chloride (Chloromethane)	TX	4960	10107207
Methyl tert-butyl ether (MTBE)	TX	5000	10107207
Methylene chloride (Dichloromethane)	TX	4975	10107207
Naphthalene	TX	5005	10107207
o-Xylene	TX	5250	10107207
Tetrachloroethylene (Perchloroethylene)	TX	5115	10107207
Toluene	TX	5140	10107207
Total trihalomethanes	TX	5205	10107207
trans-1,2-Dichloroethylene	TX	4700	10107207
trans-1,3-Dichloropropylene	TX	4685	10107207
Trichloroethene (Trichloroethylene)	TX	5170	10107207
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10107207
Vinyl chloride	TX	5235	10107207
Xylene (total)	TX	5260	10107207

### Method EPA 625

Analyte	AB	Analyte ID	Method ID
1,2,4,5-Tetrachlorobenzene	TX	6715	10107401
1,2,4-Trichlorobenzene	TX	5155	10107401
1,2-Dichlorobenzene	TX	4610	10107401
1,2-Diphenylhydrazine	TX	6220	10107401



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---

### Matrix: *Non-Potable Water*

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1,3-Dichlorobenzene	TX	4615	10107401
1,4-Dichlorobenzene	TX	4620	10107401
2,3,4,6-Tetrachlorophenol	TX	6735	10107401
2,4,5-Trichlorophenol	TX	6835	10107401
2,4,6-Trichlorophenol	TX	6840	10107401
2,4-Dichlorophenol	TX	6000	10107401
2,4-Dimethylphenol	TX	6130	10107401
2,4-Dinitrophenol	TX	6175	10107401
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10107401
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10107401
2-Chloronaphthalene	TX	5795	10107401
2-Chlorophenol	TX	5800	10107401
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10107401
2-Methylphenol (o-Cresol)	TX	6400	10107401
2-Nitrophenol	TX	6490	10107401
3,3'-Dichlorobenzidine	TX	5945	10107401
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10107401
4-Chloro-3-methylphenol	TX	5700	10107401
4-Chlorophenyl phenylether	TX	5825	10107401
4-Methylphenol (p-Cresol)	TX	6410	10107401
4-Nitrophenol	TX	6500	10107401
Acenaphthene	TX	5500	10107401
Acenaphthylene	TX	5505	10107401
Anthracene	TX	5555	10107401
Benzidine	TX	5595	10107401
Benzo(a)anthracene	TX	5575	10107401
Benzo(a)pyrene	TX	5580	10107401
Benzo(b)fluoranthene	TX	5585	10107401
Benzo(g,h,i)perylene	TX	5590	10107401
Benzo(k)fluoranthene	TX	5600	10107401



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---

### Matrix: *Non-Potable Water*

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bis(2-Chloroethoxy)methane	TX	5760	10107401
bis(2-Chloroethyl) ether	TX	5765	10107401
bis(2-Chloroisopropyl) ether	TX	5780	10107401
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10107401
Butyl benzyl phthalate	TX	5670	10107401
Chrysene	TX	5855	10107401
Dibenz(a,h) anthracene	TX	5895	10107401
Diethyl phthalate	TX	6070	10107401
Dimethyl phthalate	TX	6135	10107401
Di-n-butyl phthalate	TX	5925	10107401
Di-n-octyl phthalate	TX	6200	10107401
Fluoranthene	TX	6265	10107401
Fluorene	TX	6270	10107401
Hexachlorobenzene	TX	6275	10107401
Hexachlorobutadiene	TX	4835	10107401
Hexachlorocyclopentadiene	TX	6285	10107401
Hexachloroethane	TX	4840	10107401
Indeno(1,2,3-cd) pyrene	TX	6315	10107401
Isophorone	TX	6320	10107401
Naphthalene	TX	5005	10107401
Nitrobenzene	TX	5015	10107401
n-Nitrosodiethylamine	TX	6525	10107401
n-Nitrosodimethylamine	TX	6530	10107401
n-Nitrosodi-n-butylamine	TX	5025	10107401
n-Nitrosodi-n-propylamine	TX	6545	10107401
n-Nitrosodiphenylamine	TX	6535	10107401
Pentachlorobenzene	TX	6590	10107401
Pentachlorophenol	TX	6605	10107401
Phenanthrene	TX	6615	10107401
Phenol	TX	6625	10107401



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### Matrix: *Non-Potable Water*

Pyrene	TX	6665	10107401
Pyridine	TX	5095	10107401
<b>Method EPA 7196</b>			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Chromium (VI)	TX	1045	10162400
<b>Method EPA 7470</b>			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Mercury	TX	1095	10165807
<b>Method EPA 8015</b>			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Allyl alcohol	TX	4350	10173601
Diesel range organics (DRO)	TX	9369	10173601
Ethanol	TX	4750	10173601
Ethylene glycol	TX	4785	10173601
Gasoline range organics (GRO)	TX	9408	10173601
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10173601
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10173601
Methanol	TX	4930	10173601
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10173601
n-Propanol (1-Propanol)	TX	5055	10173601
<b>Method EPA 8021</b>			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Benzene	TX	4375	10174808
Ethylbenzene	TX	4765	10174808
m+p-xylene	TX	5240	10174808
Methyl tert-butyl ether (MTBE)	TX	5000	10174808
o-Xylene	TX	5250	10174808
Toluene	TX	5140	10174808
Xylene (total)	TX	5260	10174808
<b>Method EPA 8081</b>			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>



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### Matrix: *Non-Potable Water*

4,4'-DDD	TX	7355	10178606
4,4'-DDE	TX	7360	10178606
4,4'-DDT	TX	7365	10178606
Aldrin	TX	7025	10178606
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178606
alpha-Chlordane	TX	7240	10178606
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178606
Chlordane (tech.)	TX	7250	10178606
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178606
Dieldrin	TX	7470	10178606
Endosulfan I	TX	7510	10178606
Endosulfan II	TX	7515	10178606
Endosulfan sulfate	TX	7520	10178606
Endrin	TX	7540	10178606
Endrin aldehyde	TX	7530	10178606
Endrin ketone	TX	7535	10178606
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178606
gamma-Chlordane	TX	7245	10178606
Heptachlor	TX	7685	10178606
Heptachlor epoxide	TX	7690	10178606
Methoxychlor	TX	7810	10178606
Toxaphene (Chlorinated camphene)	TX	8250	10178606

### Method EPA 8082

Analyte	AB	Analyte ID	Method ID
Aroclor-1016 (PCB-1016)	TX	8880	10179007
Aroclor-1221 (PCB-1221)	TX	8885	10179007
Aroclor-1232 (PCB-1232)	TX	8890	10179007
Aroclor-1242 (PCB-1242)	TX	8895	10179007
Aroclor-1248 (PCB-1248)	TX	8900	10179007
Aroclor-1254 (PCB-1254)	TX	8905	10179007



# Texas Commission on Environmental Quality

## NELAP - Recognized Laboratory Fields of Accreditation



TestAmerica Laboratories, Inc. - Houston

6310 Rothway Drive  
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Certificate: T104704223-15-16

Expiration Date: 10/31/2015

Issue Date: 7/7/2015

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### Matrix: *Non-Potable Water*

Aroclor-1260 (PCB-1260)	TX	8910	10179007
PCBs (total)	TX	8870	10179007

#### Method EPA 8151

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10183207
2,4-D	TX	8545	10183207
2,4-DB	TX	8560	10183207
Dalapon	TX	8555	10183207
Dicamba	TX	8595	10183207
Dichloroprop (Dichloroprop, Weedone)	TX	8605	10183207
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10183207
MCPA	TX	7775	10183207
MCPP	TX	7780	10183207
Silvex (2,4,5-TP)	TX	8650	10183207

#### Method EPA 8260

Analyte	AB	Analyte ID	Method ID
1,1,1,2-Tetrachloroethane	TX	5105	10184802
1,1,1-Trichloroethane	TX	5160	10184802
1,1,2,2-Tetrachloroethane	TX	5110	10184802
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10184802
1,1,2-Trichloroethane	TX	5165	10184802
1,1-Dichloroethane	TX	4630	10184802
1,1-Dichloroethylene	TX	4640	10184802
1,1-Dichloropropene	TX	4670	10184802
1,2,3-Trichlorobenzene	TX	5150	10184802
1,2,3-Trichloropropane	TX	5180	10184802
1,2,4-Trichlorobenzene	TX	5155	10184802
1,2,4-Trimethylbenzene	TX	5210	10184802
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10184802
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184802
1,2-Dichlorobenzene	TX	4610	10184802





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### Matrix: *Non-Potable Water*

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1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184802
1,2-Dichloropropane	TX	4655	10184802
1,3,5-Trimethylbenzene	TX	5215	10184802
1,3-Dichlorobenzene	TX	4615	10184802
1,3-Dichloropropane	TX	4660	10184802
1,4-Dichlorobenzene	TX	4620	10184802
1,4-Dioxane (1,4-Diethyleneoxide)	TX	4735	10184802
2,2-Dichloropropane	TX	4665	10184802
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184802
2-Chloroethyl vinyl ether	TX	4500	10184802
2-Chlorotoluene	TX	4535	10184802
2-Hexanone (MBK)	TX	4860	10184802
2-Nitropropane	TX	5020	10184802
4-Chlorotoluene	TX	4540	10184802
4-Isopropyltoluene (p-Cymene)	TX	4915	10184802
4-Methyl-2-pentanone (MIBK)	TX	4995	10184802
Acetone (2-Propanone)	TX	4315	10184802
Acetonitrile	TX	4320	10184802
Acrolein (Propenal)	TX	4325	10184802
Acrylonitrile	TX	4340	10184802
Allyl chloride (3-Chloropropene)	TX	4355	10184802
Benzene	TX	4375	10184802
Benzyl chloride	TX	5635	10184802
Bromobenzene	TX	4385	10184802
Bromochloromethane	TX	4390	10184802
Bromodichloromethane	TX	4395	10184802
Bromoform	TX	4400	10184802
Carbon disulfide	TX	4450	10184802
Carbon tetrachloride	TX	4455	10184802
Chlorobenzene	TX	4475	10184802



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### Matrix: *Non-Potable Water*

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Chlorodibromomethane	TX	4575	10184802
Chloroethane (Ethyl chloride)	TX	4485	10184802
Chloroform	TX	4505	10184802
Chloroprene (2-Chloro-1,3-butadiene)	TX	4525	10184802
cis-1,2-Dichloroethylene	TX	4645	10184802
cis-1,3-Dichloropropene	TX	4680	10184802
Dibromofluoromethane	TX	4590	10184802
Dibromomethane (Methylene bromide)	TX	4595	10184802
Dichlorodifluoromethane (Freon-12)	TX	4625	10184802
Diethyl ether	TX	4725	10184802
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	TX	4745	10184802
Ethyl acetate	TX	4755	10184802
Ethyl methacrylate	TX	4810	10184802
Ethylbenzene	TX	4765	10184802
Ethylene oxide	TX	4795	10184802
Hexachlorobutadiene	TX	4835	10184802
Iodomethane (Methyl iodide)	TX	4870	10184802
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10184802
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10184802
Isopropylbenzene (Cumene)	TX	4900	10184802
m+p-xylene	TX	5240	10184802
Methyl acrylate	TX	4945	10184802
Methyl bromide (Bromomethane)	TX	4950	10184802
Methyl chloride (Chloromethane)	TX	4960	10184802
Methyl methacrylate	TX	4990	10184802
Methyl tert-butyl ether (MTBE)	TX	5000	10184802
Methylcyclohexane	TX	4965	10184802
Methylene chloride (Dichloromethane)	TX	4975	10184802
Naphthalene	TX	5005	10184802
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10184802





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### Matrix: *Non-Potable Water*

n-Butylbenzene	TX	4435	10184802
n-Propylbenzene	TX	5090	10184802
o-Xylene	TX	5250	10184802
Propionitrile (Ethyl cyanide)	TX	5080	10184802
sec-Butylbenzene	TX	4440	10184802
Styrene	TX	5100	10184802
tert-Butyl alcohol	TX	4420	10184802
tert-Butylbenzene	TX	4445	10184802
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184802
Toluene	TX	5140	10184802
Total trihalomethanes	TX	5205	10184802
trans-1,2-Dichloroethylene	TX	4700	10184802
trans-1,3-Dichloropropylene	TX	4685	10184802
trans-1,4-Dichloro-2-butene	TX	4605	10184802
Trichloroethene (Trichloroethylene)	TX	5170	10184802
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184802
Vinyl acetate	TX	5225	10184802
Vinyl chloride	TX	5235	10184802
Xylene (total)	TX	5260	10184802

### Method EPA 8270

Analyte	AB	Analyte ID	Method ID
1,2,4,5-Tetrachlorobenzene	TX	6715	10185805
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805
1,2-Dinitrobenzene	TX	6155	10185805
1,2-Diphenylhydrazine	TX	6220	10185805
1,3,5-Trinitrobenzene (1,3,5-TNB)	TX	6885	10185805
1,3-Dichlorobenzene	TX	4615	10185805
1,3-Dinitrobenzene (1,3-DNB)	TX	6160	10185805
1,4-Dichlorobenzene	TX	4620	10185805



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### Matrix: *Non-Potable Water*

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1,4-Dinitrobenzene	TX	6165	10185805
1,4-Naphthoquinone	TX	6420	10185805
1,4-Phenylenediamine	TX	6630	10185805
1-Chloronaphthalene	TX	5790	10185805
1-Naphthylamine	TX	6425	10185805
2,3,4,6-Tetrachlorophenol	TX	6735	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,5-Trimethylaniline	TX	6880	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Diaminotoluene	TX	5880	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,4-Toluene diisocyanate	TX	9636	10185805
2,6-Dichlorophenol	TX	6005	10185805
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Acetylaminofluorene	TX	5515	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylaniline (o-Toluidine)	TX	5145	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Naphthylamine	TX	6430	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
2-Picoline (2-Methylpyridine)	TX	5050	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3,3'-Dimethoxybenzidine	TX	6100	10185805



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### Matrix: *Non-Potable Water*

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3,3'-Dimethylbenzidine	TX	6120	10185805
3-Methylcholanthrene	TX	6355	10185805
3-Methylphenol (m-Cresol)	TX	6405	10185805
3-Nitroaniline	TX	6465	10185805
4-Aminobiphenyl	TX	5540	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Dimethyl aminoazobenzene	TX	6105	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrophenol	TX	6500	10185805
4-Nitroquinoline-1-oxide	TX	6510	10185805
5-Nitro-o-toluidine	TX	6570	10185805
7,12-Dimethylbenz(a) anthracene	TX	6115	10185805
a-a-Dimethylphenethylamine	TX	6125	10185805
Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805
Acetophenone	TX	5510	10185805
Aniline	TX	5545	10185805
Anthracene	TX	5555	10185805
Azobenzene	TX	5562	10185805
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzoic acid	TX	5610	10185805
Benzyl alcohol	TX	5630	10185805



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### Matrix: *Non-Potable Water*

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Biphenyl	TX	5640	10185805
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Chloroisopropyl) ether	TX	5780	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Caprolactam	TX	7180	10185805
Carbazole	TX	5680	10185805
Chrysene	TX	5855	10185805
Diallate	TX	7405	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenz(a,j) acridine	TX	5900	10185805
Dibenzo(a,e) pyrene	TX	5890	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185805
Dimethoate	TX	7475	10185805
Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Diphenylamine	TX	6205	10185805
Disulfoton	TX	8625	10185805
Ethyl methanesulfonate	TX	6260	10185805
Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Hexachloropropene	TX	6295	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805



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### Matrix: *Non-Potable Water*

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Isodrin	TX	7725	10185805
Isophorone	TX	6320	10185805
Isosafrole	TX	6325	10185805
Methyl methanesulfonate	TX	6375	10185805
Methyl parathion (Parathion, methyl)	TX	7825	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805
n-Nitrosodiethylamine	TX	6525	10185805
n-Nitrosodimethylamine	TX	6530	10185805
n-Nitrosodi-n-butylamine	TX	5025	10185805
n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
n-Nitrosomethylethylamine	TX	6550	10185805
n-Nitrosomorpholine	TX	6555	10185805
n-Nitrosopiperidine	TX	6560	10185805
n-Nitrosopyrrolidine	TX	6565	10185805
o,o,o-Triethyl phosphorothioate	TX	8290	10185805
Parathion, ethyl	TX	7955	10185805
Pentachlorobenzene	TX	6590	10185805
Pentachloronitrobenzene (PCNB)	TX	6600	10185805
Pentachlorophenol	TX	6605	10185805
Phenacetin	TX	6610	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Phorate	TX	7985	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805
Safrole	TX	6685	10185805
Thionazin (Zinophos)	TX	8235	10185805



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### Matrix: *Non-Potable Water*

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#### Method EPA 9012

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	10193405
Total Cyanide	TX	1635	10193405

#### Method EPA 9034

Analyte	AB	Analyte ID	Method ID
Sulfide	TX	2005	10196006

#### Method EPA 9040

Analyte	AB	Analyte ID	Method ID
pH	TX	1900	10197203

#### Method EPA 9050

Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	10198808

#### Method EPA 9056

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10199209
Chloride	TX	1575	10199209
Fluoride	TX	1730	10199209
Nitrate as N	TX	1810	10199209
Nitrate-nitrite	TX	1820	10199209
Nitrite as N	TX	1840	10199209
Sulfate	TX	2000	10199209

#### Method EPA 9060

Analyte	AB	Analyte ID	Method ID
Total Organic Carbon (TOC)	TX	2040	10200201

#### Method EPA 9066

Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10200609

#### Method EPA RSK 175

Analyte	AB	Analyte ID	Method ID
Ethane	TX	4747	10212905





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Ethene	TX	4752	10212905
Methane	TX	4926	10212905
<b>Method</b> HACH 8000			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Chemical oxygen demand (COD)	TX	1565	60003001
<b>Method</b> HACH 8507			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Nitrite as N	TX	1840	60004208
<b>Method</b> SM 2120 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Color	TX	1605	20223807
<b>Method</b> SM 2130 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Turbidity	TX	2055	20042200
<b>Method</b> SM 2310 B (4a)			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Acidity, as CaCO <sub>3</sub>	TX	1500	20002806
<b>Method</b> SM 2320 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Alkalinity as CaCO <sub>3</sub>	TX	1505	20045005
<b>Method</b> SM 2340 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Total hardness as CaCO <sub>3</sub>	TX	1755	20046008
<b>Method</b> SM 2510 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Conductivity	TX	1610	20048004
<b>Method</b> SM 2540 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Residue-total (total solids)	TX	1950	20004608
<b>Method</b> SM 2540 C			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Residue-filterable (TDS)	TX	1955	20049803



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### Matrix: *Non-Potable Water*

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Method SM 2540 D

Analyte	AB	Analyte ID	Method ID
Residue-nonfilterable (TSS)	TX	1960	20004802

Method SM 3500-Cr B

Analyte	AB	Analyte ID	Method ID
Chromium (VI)	TX	1045	20065809

Method SM 3500-Cr D

Analyte	AB	Analyte ID	Method ID
Chromium (VI)	TX	1045	20009001

Method SM 4500-Cl F

Analyte	AB	Analyte ID	Method ID
Total residual chlorine	TX	1940	20080482

Method SM 4500-CN<sup>-</sup> G

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	20021607

Method SM 4500-H<sup>+</sup> B

Analyte	AB	Analyte ID	Method ID
pH	TX	1900	20104603

Method SM 4500-NH<sub>3</sub> B

Analyte	AB	Analyte ID	Method ID
Ammonia as N	TX	1515	20022804

Method SM 4500-NH<sub>3</sub> G

Analyte	AB	Analyte ID	Method ID
Ammonia as N	TX	1515	20023205

Method SM 4500-NO<sub>3</sub> F

Analyte	AB	Analyte ID	Method ID
Nitrate-nitrite	TX	1820	20024402

Method SM 4500-O C

Analyte	AB	Analyte ID	Method ID
Oxygen, dissolved	TX	1880	20025201

Method SM 4500-P E

Analyte	AB	Analyte ID	Method ID
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### Matrix: *Non-Potable Water*

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Orthophosphate as P	TX	1870	20025803
Phosphorus	TX	1910	20025803
<b>Method</b> SM 4500-S2 <sup>-</sup> D			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Sulfide	TX	2005	20125400
<b>Method</b> SM 4500-S2 <sup>-</sup> E			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Sulfide	TX	2005	20026408
<b>Method</b> SM 4500-SO3 <sup>-</sup> B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Sulfite	TX	2015	20026806
<b>Method</b> SM 5210 B			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Biochemical oxygen demand (BOD)	TX	1530	20027401
Carbonaceous BOD, CBOD	TX	1555	20027401
<b>Method</b> SM 5310 D			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Total Organic Carbon (TOC)	TX	2040	20139202
<b>Method</b> SM 5540 C			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Surfactants - MBAS	TX	2025	20144405
<b>Method</b> TCEQ 1005			
<b>Analyte</b>	<b>AB</b>	<b>Analyte ID</b>	<b>Method ID</b>
Total Petroleum Hydrocarbons (TPH)	TX	2050	90019208



# Texas Commission on Environmental Quality

## NELAP - Recognized Laboratory Fields of Accreditation



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### Matrix: *Solid & Chemical Materials*

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**Method** EPA 1010

Analyte	AB	Analyte ID	Method ID
Ignitability	TX	1780	10116606

**Method** EPA 1311

Analyte	AB	Analyte ID	Method ID
TCLP	TX	849	10118806

**Method** EPA 1312

Analyte	AB	Analyte ID	Method ID
SPLP	TX	850	10119003

**Method** EPA 300.0

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10053006
Chloride	TX	1575	10053006
Fluoride	TX	1730	10053006
Nitrate as N	TX	1810	10053006
Nitrate-nitrite	TX	1820	10053006
Nitrite as N	TX	1840	10053006
Sulfate	TX	2000	10053006

**Method** EPA 353.2

Analyte	AB	Analyte ID	Method ID
Nitrate-nitrite	TX	1820	10067604

**Method** EPA 365.2

Analyte	AB	Analyte ID	Method ID
Phosphorus	TX	1910	10070403

**Method** EPA 6010

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10155609
Antimony	TX	1005	10155609
Arsenic	TX	1010	10155609
Barium	TX	1015	10155609
Beryllium	TX	1020	10155609



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### Matrix: *Solid & Chemical Materials*

Boron	TX	1025	10155609
Cadmium	TX	1030	10155609
Calcium	TX	1035	10155609
Chromium	TX	1040	10155609
Cobalt	TX	1050	10155609
Copper	TX	1055	10155609
Iron	TX	1070	10155609
Lead	TX	1075	10155609
Magnesium	TX	1085	10155609
Manganese	TX	1090	10155609
Molybdenum	TX	1100	10155609
Nickel	TX	1105	10155609
Potassium	TX	1125	10155609
Selenium	TX	1140	10155609
Silica as SiO <sub>2</sub>	TX	1990	10155609
Silver	TX	1150	10155609
Sodium	TX	1155	10155609
Strontium	TX	1160	10155609
Thallium	TX	1165	10155609
Tin	TX	1175	10155609
Titanium	TX	1180	10155609
Vanadium	TX	1185	10155609
Zinc	TX	1190	10155609

#### Method EPA 7471

Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10166208

#### Method EPA 8015

Analyte	AB	Analyte ID	Method ID
Allyl alcohol	TX	4350	10173601
Diesel range organics (DRO)	TX	9369	10173601
Ethanol	TX	4750	10173601



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### Matrix: *Solid & Chemical Materials*

Ethylene glycol	TX	4785	10173601
Gasoline range organics (GRO)	TX	9408	10173601
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10173601
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10173601
Methanol	TX	4930	10173601
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10173601
n-Propanol (1-Propanol)	TX	5055	10173601

### Method EPA 8021

Analyte	AB	Analyte ID	Method ID
Benzene	TX	4375	10174808
Ethylbenzene	TX	4765	10174808
m+p-xylene	TX	5240	10174808
Methyl tert-butyl ether (MTBE)	TX	5000	10174808
o-Xylene	TX	5250	10174808
Toluene	TX	5140	10174808
Xylene (total)	TX	5260	10174808

### Method EPA 8081

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10178606
4,4'-DDE	TX	7360	10178606
4,4'-DDT	TX	7365	10178606
Aldrin	TX	7025	10178606
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178606
alpha-Chlordane	TX	7240	10178606
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178606
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178606
Dieldrin	TX	7470	10178606
Endosulfan I	TX	7510	10178606
Endosulfan II	TX	7515	10178606
Endosulfan sulfate	TX	7520	10178606
Endrin	TX	7540	10178606



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### Matrix: *Solid & Chemical Materials*

Endrin aldehyde	TX	7530	10178606
Endrin ketone	TX	7535	10178606
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178606
gamma-Chlordane	TX	7245	10178606
Heptachlor	TX	7685	10178606
Heptachlor epoxide	TX	7690	10178606
Methoxychlor	TX	7810	10178606
Toxaphene (Chlorinated camphene)	TX	8250	10178606

### Method EPA 8082

Analyte	AB	Analyte ID	Method ID
Aroclor-1016 (PCB-1016)	TX	8880	10179007
Aroclor-1221 (PCB-1221)	TX	8885	10179007
Aroclor-1232 (PCB-1232)	TX	8890	10179007
Aroclor-1242 (PCB-1242)	TX	8895	10179007
Aroclor-1248 (PCB-1248)	TX	8900	10179007
Aroclor-1254 (PCB-1254)	TX	8905	10179007
Aroclor-1260 (PCB-1260)	TX	8910	10179007
PCBs (total)	TX	8870	10179007

### Method EPA 8151

Analyte	AB	Analyte ID	Method ID
2,4,5-T	TX	8655	10183207
2,4-D	TX	8545	10183207
2,4-DB	TX	8560	10183207
Dalapon	TX	8555	10183207
Dicamba	TX	8595	10183207
Dichloroprop (Dichloroprop, Weedone)	TX	8605	10183207
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	TX	8620	10183207
MCPA	TX	7775	10183207
MCPP	TX	7780	10183207
Silvex (2,4,5-TP)	TX	8650	10183207



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### Matrix: *Solid & Chemical Materials*

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#### Method EPA 8260

Analyte	AB	Analyte ID	Method ID
1,1,1,2-Tetrachloroethane	TX	5105	10184802
1,1,1-Trichloroethane	TX	5160	10184802
1,1,2,2-Tetrachloroethane	TX	5110	10184802
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10184802
1,1,2-Trichloroethane	TX	5165	10184802
1,1-Dichloroethane	TX	4630	10184802
1,1-Dichloroethylene	TX	4640	10184802
1,1-Dichloropropene	TX	4670	10184802
1,2,3-Trichlorobenzene	TX	5150	10184802
1,2,3-Trichloropropane	TX	5180	10184802
1,2,4-Trichlorobenzene	TX	5155	10184802
1,2,4-Trimethylbenzene	TX	5210	10184802
1,2-Dibromo-3-chloropropane (DBCP)	TX	4570	10184802
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184802
1,2-Dichlorobenzene	TX	4610	10184802
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184802
1,2-Dichloropropane	TX	4655	10184802
1,3,5-Trimethylbenzene	TX	5215	10184802
1,3-Dichlorobenzene	TX	4615	10184802
1,3-Dichloropropane	TX	4660	10184802
1,4-Dichlorobenzene	TX	4620	10184802
1,4-Dioxane (1,4-Diethyleneoxide)	TX	4735	10184802
2,2-Dichloropropane	TX	4665	10184802
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184802
2-Chloroethyl vinyl ether	TX	4500	10184802
2-Chlorotoluene	TX	4535	10184802
2-Hexanone (MBK)	TX	4860	10184802
2-Nitropropane	TX	5020	10184802





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### Matrix: *Solid & Chemical Materials*

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4-Chlorotoluene	TX	4540	10184802
4-Isopropyltoluene (p-Cymene)	TX	4915	10184802
4-Methyl-2-pentanone (MIBK)	TX	4995	10184802
Acetone (2-Propanone)	TX	4315	10184802
Acetonitrile	TX	4320	10184802
Acrolein (Propenal)	TX	4325	10184802
Acrylonitrile	TX	4340	10184802
Allyl chloride (3-Chloropropene)	TX	4355	10184802
Benzene	TX	4375	10184802
Benzyl chloride	TX	5635	10184802
Bromobenzene	TX	4385	10184802
Bromochloromethane	TX	4390	10184802
Bromodichloromethane	TX	4395	10184802
Bromoform	TX	4400	10184802
Carbon disulfide	TX	4450	10184802
Carbon tetrachloride	TX	4455	10184802
Chlorobenzene	TX	4475	10184802
Chlorodibromomethane	TX	4575	10184802
Chloroethane (Ethyl chloride)	TX	4485	10184802
Chloroform	TX	4505	10184802
Chloroprene (2-Chloro-1,3-butadiene)	TX	4525	10184802
cis-1,2-Dichloroethylene	TX	4645	10184802
cis-1,3-Dichloropropene	TX	4680	10184802
Dibromofluoromethane	TX	4590	10184802
Dibromomethane (Methylene bromide)	TX	4595	10184802
Dichlorodifluoromethane (Freon-12)	TX	4625	10184802
Ethyl acetate	TX	4755	10184802
Ethyl methacrylate	TX	4810	10184802
Ethylbenzene	TX	4765	10184802
Ethylene oxide	TX	4795	10184802



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### Matrix: *Solid & Chemical Materials*

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Hexachlorobutadiene	TX	4835	10184802
Iodomethane (Methyl iodide)	TX	4870	10184802
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10184802
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10184802
Isopropylbenzene (Cumene)	TX	4900	10184802
m+p-xylene	TX	5240	10184802
Methacrylonitrile	TX	4925	10184802
Methyl acrylate	TX	4945	10184802
Methyl bromide (Bromomethane)	TX	4950	10184802
Methyl chloride (Chloromethane)	TX	4960	10184802
Methyl methacrylate	TX	4990	10184802
Methyl tert-butyl ether (MTBE)	TX	5000	10184802
Methylcyclohexane	TX	4965	10184802
Methylene chloride (Dichloromethane)	TX	4975	10184802
Naphthalene	TX	5005	10184802
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10184802
n-Butylbenzene	TX	4435	10184802
n-Propylbenzene	TX	5090	10184802
o-Xylene	TX	5250	10184802
Propionitrile (Ethyl cyanide)	TX	5080	10184802
sec-Butylbenzene	TX	4440	10184802
Styrene	TX	5100	10184802
tert-Butyl alcohol	TX	4420	10184802
tert-Butylbenzene	TX	4445	10184802
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184802
Toluene	TX	5140	10184802
trans-1,2-Dichloroethylene	TX	4700	10184802
trans-1,3-Dichloropropylene	TX	4685	10184802
trans-1,4-Dichloro-2-butene	TX	4605	10184802
Trichloroethene (Trichloroethylene)	TX	5170	10184802





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### Matrix: *Solid & Chemical Materials*

Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184802
Vinyl acetate	TX	5225	10184802
Vinyl chloride	TX	5235	10184802
Xylene (total)	TX	5260	10184802

### Method EPA 8270

Analyte	AB	Analyte ID	Method ID
1,2,4,5-Tetrachlorobenzene	TX	6715	10185805
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805
1,2-Dinitrobenzene	TX	6155	10185805
1,2-Diphenylhydrazine	TX	6220	10185805
1,3,5-Trinitrobenzene (1,3,5-TNB)	TX	6885	10185805
1,3-Dichlorobenzene	TX	4615	10185805
1,3-Dinitrobenzene (1,3-DNB)	TX	6160	10185805
1,4-Dichlorobenzene	TX	4620	10185805
1,4-Dinitrobenzene	TX	6165	10185805
1,4-Naphthoquinone	TX	6420	10185805
1,4-Phenylenediamine	TX	6630	10185805
1-Chloronaphthalene	TX	5790	10185805
1-Naphthylamine	TX	6425	10185805
2,3,4,6-Tetrachlorophenol	TX	6735	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Diaminotoluene	TX	5880	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,4-Toluene diisocyanate	TX	9636	10185805
2,6-Dichlorophenol	TX	6005	10185805



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### Matrix: *Solid & Chemical Materials*

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2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Acetylaminofluorene	TX	5515	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylaniline (o-Toluidine)	TX	5145	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Naphthylamine	TX	6430	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
2-Picoline (2-Methylpyridine)	TX	5050	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3,3'-Dimethoxybenzidine	TX	6100	10185805
3,3'-Dimethylbenzidine	TX	6120	10185805
3-Methylcholanthrene	TX	6355	10185805
3-Methylphenol (m-Cresol)	TX	6405	10185805
3-Nitroaniline	TX	6465	10185805
4-Aminobiphenyl	TX	5540	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloro-3-methylphenol	TX	5700	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrobiphenyl	TX	6480	10185805
4-Nitrophenol	TX	6500	10185805
4-Nitroquinoline-1-oxide	TX	6510	10185805
5-Nitro-o-toluidine	TX	6570	10185805
7,12-Dimethylbenz(a) anthracene	TX	6115	10185805



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### Matrix: *Solid & Chemical Materials*

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Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805
Acetophenone	TX	5510	10185805
Aniline	TX	5545	10185805
Anthracene	TX	5555	10185805
Azobenzene	TX	5562	10185805
Benzenethiol (Thiophenol)	TX	6750	10185805
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzoic acid	TX	5610	10185805
Benzyl alcohol	TX	5630	10185805
Biphenyl	TX	5640	10185805
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Chloroisopropyl) ether	TX	5780	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Caprolactam	TX	7180	10185805
Carbazole	TX	5680	10185805
Chlorobenzilate	TX	7260	10185805
Chrysene	TX	5855	10185805
Diallate	TX	7405	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185805
Dimethoate	TX	7475	10185805



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### Matrix: *Solid & Chemical Materials*

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Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Diphenylamine	TX	6205	10185805
Disulfoton	TX	8625	10185805
Ethyl methanesulfonate	TX	6260	10185805
Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Hexachlorophene	TX	6290	10185805
Hexachloropropene	TX	6295	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805
Isodrin	TX	7725	10185805
Isophorone	TX	6320	10185805
Isosafrole	TX	6325	10185805
Methyl methanesulfonate	TX	6375	10185805
Methyl parathion (Parathion, methyl)	TX	7825	10185805
Methylphenols, total	TX	10313	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805
n-Nitrosodiethylamine	TX	6525	10185805
n-Nitrosodimethylamine	TX	6530	10185805
n-Nitrosodi-n-butylamine	TX	5025	10185805
n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
n-Nitrosomethylethylamine	TX	6550	10185805
n-Nitrosomorpholine	TX	6555	10185805



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### Matrix: *Solid & Chemical Materials*

n-Nitrosopiperidine	TX	6560	10185805
n-Nitrosopyrrolidine	TX	6565	10185805
o,o,o-Triethyl phosphorothioate	TX	8290	10185805
Parathion, ethyl	TX	7955	10185805
Pentachlorobenzene	TX	6590	10185805
Pentachloronitrobenzene (PCNB)	TX	6600	10185805
Pentachlorophenol	TX	6605	10185805
Phenacetin	TX	6610	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Phorate	TX	7985	10185805
Pronamide (Kerb)	TX	6650	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805
Safrole	TX	6685	10185805
Thionazin (Zinophos)	TX	8235	10185805

### Method EPA 9012

Analyte	AB	Analyte ID	Method ID
Amenable cyanide	TX	1510	10193405
Total Cyanide	TX	1635	10193405

### Method EPA 9034

Analyte	AB	Analyte ID	Method ID
Sulfide	TX	2005	10196006

### Method EPA 9045

Analyte	AB	Analyte ID	Method ID
Corrosivity	TX	1615	10198400
pH	TX	1900	10198400

### Method EPA 9050

Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	10198808



# Texas Commission on Environmental Quality

## NELAP - Recognized Laboratory Fields of Accreditation



TestAmerica Laboratories, Inc. - Houston

6310 Rothway Drive  
Houston, TX 77040-5056

Certificate: T104704223-15-16  
Expiration Date: 10/31/2015  
Issue Date: 7/7/2015

These fields of accreditation supercede all previous fields. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

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### Matrix: *Solid & Chemical Materials*

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#### Method EPA 9056

Analyte	AB	Analyte ID	Method ID
Bromide	TX	1540	10199209
Chloride	TX	1575	10199209
Fluoride	TX	1730	10199209
Nitrate as N	TX	1810	10199209
Nitrate-nitrite	TX	1820	10199209
Nitrite as N	TX	1840	10199209
Sulfate	TX	2000	10199209

#### Method EPA 9066

Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10200609

#### Method EPA 9071

Analyte	AB	Analyte ID	Method ID
Silica Gel Treated n-Hexane Extractable Material (SGT-HEM)	TX	10220	10201806

#### Method EPA 9095

Analyte	AB	Analyte ID	Method ID
Paint Filter Liquids Test	TX	10312	10204203

#### Method SM 2320 B

Analyte	AB	Analyte ID	Method ID
Alkalinity as CaCO <sub>3</sub>	TX	1505	20045005

#### Method SM 2510 B

Analyte	AB	Analyte ID	Method ID
Conductivity	TX	1610	20048004

#### Method TCEQ 1005

Analyte	AB	Analyte ID	Method ID
Total Petroleum Hydrocarbons (TPH)	TX	2050	90019208





## Data Usability Summary

**Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4**

<b>Sample Dates:</b>	June 8, 9, 10 and 11, 2015	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

## 1.0 TESTS/ METHODS

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)

Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Percent moisture/percent solids (general chemistry)

## 2.0 SAMPLES

53 soil samples, 7 field duplicates, and 9 field MS/MSD pairs. See Table 1 for a complete cross-referenced listing of samples.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.

The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures



## Data Usability Summary

Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4

- Results Reporting Procedures
- Laboratory and Field QC Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Organics: 60-140% spike recovery (and not less than 10% or data is rejected) and  $\pm$  MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.
- Aqueous Samples:  $\pm$  2x MQL difference (if either result is less than 5x MQL) or 30% RPD (for field duplicates) as recommended in TRRP-13

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or ‘see’ in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample





## Data Usability Summary

Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4

characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or 'see' in a given sample. For TRRP, non-detects are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report.

## USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1  $^{Tot}Soil_{Comb}$  and Tier 1, 2 or 3  $^{GW}Soil_{Ing}$  PCLs for a 30-acre source area. As needed per TRRP, the unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria.



## Data Usability Summary

Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4

2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high can be used; however, the reported concentration may be high. Detects that are estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.

Reviewer: Christina Higginbotham

8/31/15

## QUALITY CONTROL PARAMETERS AND OUTCOMES

### Data Completeness

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format.

### Chain-of-Custody

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, with the following exceptions:

- Four samples were left off the chain-of-custody for 600-113019 and were subsequently added.
- A number of deeper interval samples were archived at the laboratory pending results of shallow interval samples.

### Sample Condition

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation. Although temperatures were marginally outside of 2-6 °C in some cases, sample integrity is not believed to be affected:

- 600-113019, the temperature of the cooler at receipt was 2.2°C.
- 600-113063, the temperature of the cooler at receipt was 1.9°C.
- 600-113192, the temperature of the cooler at receipt was 3.2°C
- 600-113214, the temperature of the cooler at receipt was 0.3°C and 0.9°C

### Field Procedures

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.



## Data Usability Summary

Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4

9 site-specific MS/MSDs and 7 field duplicate samples were analyzed with the investigative samples.

## Results Reporting Procedures

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.

Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

MQLs- The LORPs have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte.

MDLs- According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

## Laboratory Blanks

Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. No analytes were detected in the laboratory blanks except for lead in 600-113214 batch 165417. Five times the method blank detection of 5.175 mg/kg was less than all lead concentrations in this data package; therefore, sample results were not affected.

## Field QC Blanks

Five equipment blanks were collected as part of these data packages. Lead was detected at an estimated value in the equipment blank collected in package 600-113192 and in Equipment Blank 2 (Auger) in package 600-113214; however, field samples had elevated lead concentrations and are of a soil matrix, and therefore cannot be correlated to any potential cross contamination from decontamination procedures.



## Data Usability Summary

Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4

### Laboratory Control Sample

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects, except for the following:

- 600-113019, antimony had slightly low LCS recovery of 69.4% which is only slightly below TRRP criteria of 70-130%. Samples in the associated batch were not qualified on this basis.

### Matrix Spike Recovery

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using designated samples from the site as shown in Table 1. The lab also selected unrelated samples as MS/MSDs for several job packages. In these cases, MS/MSD recoveries were not evaluated. In cases where the spiking amount is sufficiently less than the amount in the unspiked parent sample, the data were considered inconclusive and the MS/MSD recovery check was waived.

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
164854	600-113019-9	2015-CUFT-16C 2-4	antimony	<0.293	66.3, 64.5	34	34	JL or UJL
164854	600-113019-25	B3RA-B 0-0.5	antimony	<0.268	60.1, 57.3	33	32	JL or UJL
164854	600-113019-9	2015-CUFT-16C 2-4	Lead-DL	104	66.3, 64.5	129	23	-
164854	600-113019-25	B3RA-B 0-0.5	Lead-DL	95.6	60.1, 57.3	31	134	J
165116	600-113192-10	2015-SCC-16D 0.5-2	antimony	0.480 J	59.1, 56.9	51	49	JL or UJL
165116	600-113192-10	2015-SCC-16D 0.5-2	lead	40.8	59.1, 56.9	117	57	-
167686	600-113192-28	2015-MW-17D 2-4	antimony	<0.293	64.5, 65.1	28	34	JL or UJL
167686	600-113192-28	2015-MW-17D 2-4	Lead (DL)	101	64.5, 65.1	4	107	-
165357	600-113214-	2015-NDA-	antimony	17.5	63.8, 61.5	52	58	JL or



## Data Usability Summary

**Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4**

165417	5 600-113214-30	11 0-0.5 2015-C2L-C01D 0-0.5	antimony	<0.285	62.5, 63.8	38	40	UJL JL or UJL
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NA – Not available.

Samples qualified only if both MS and MSD were outside of criteria of approximately 70-130%

## Surrogate Recovery

Organic analyses where requested had surrogate recoveries within acceptable criteria.

## Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals analytical batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes one MSD and MD for Total Metals.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	MSD RPD	MD RPD	Qual
164854	600-113019-25	B3RA-B 0-0.5	antimony	<0.268	32	NC	-
164854	600-113019-9	2015-CUFT-16C 2-4	antimony	<0.293	34	NC	-
164854	600-113019-9	2015-CUFT-16C 2-4	Lead-DL	104	46	78	J
164854	600-113019-25	B3RA-B 0-0.5	Lead-DL	95.6	41	58	J
165116	600-113192-10	2015-SCC-16D 0.5-2	Lead-DL	40.8	40	34	J
167686	600-113192-28	2015-MW-17D 2-4	Lead (DL)	101	49	47	J
165357	600-113214-5	2015-NDA-11 0-0.5	selenium	1.83J	2	41	-
165417	600-113214-30	2015-C2L-C01D 0-0.5	arsenic	7.80	13	43	-

Samples qualified only if both MS and MSD RPDs were outside of criteria of 30%. Where MSD RPDs were acceptable and MD RPDs were outside of criteria or not calculated, a batch effect was not indicated and the parent sample (only) was qualified as estimated.

## Field Duplicate Precision

7 field duplicates were collected with the samples. Results are summarized in Table 3. The RPDs (or the absolute difference between results for concentrations <5x MQL and for non-detects) are within the TRRP criteria in most cases, which indicates good precision for the sampling, preparation, and analysis technique on the given sample matrix. Qualifications are indicated on Table 3.



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## **Data Usability Summary**

**Test America Work Orders: 113214-1, 113214-3, 113192-1, 113192-3, 113063-1, 113063-3, 113019-1, 113019-3, 113019-4**

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### **Instrument Tuning**

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.

### **Instrument Calibration**

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations.

### **Instrument Performance**

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists.

### **Internal Standards**

According to the LRC, area counts and retention times were within method requirements.



**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Sample Date	Matrix	Comments
600-113019-1	2015-CUFT-16A 0-0.5	06/08/2015	Soil	
600-113019-5	2015-CUFT-15A 0-0.5	06/08/2015	Soil	
600-113019-9	2015-CUFT-16C 2-4	06/08/2015	Soil	MS/MSD
600-113019-10	2015-CUFT-16C 4-6	06/08/2015	Soil	
600-113019-11	DUP-02	06/08/2015	Soil	Parent sample 2015-CUFT-16C 2-4
600-113019-12	SRB-VS-7A 0-0.5	06/08/2015	Soil	
600-113019-15	SRB-VS-3A 0-0.5	06/08/2015	Soil	
600-113019-18	2015-C2L-06F 0-0.5	06/08/2015	Soil	
600-113019-21	B3RA-A 0-0.5	06/08/2015	Soil	
600-113019-22	DUP-01	06/08/2015	Soil	Parent sample B3RA-A 0-0.5
600-113019-25	B3RA-B 0-0.5	06/08/2015	Soil	MS/MSD
600-113019-28	B3RA-C 0-0.5	06/08/2015	Soil	
600-113019-31	2015-C2L-06E 0-0.5	06/08/2015	Soil	
600-113019-34	2015-CUFT-16B 0-0.5	06/08/2015	Soil	
600-113019-35	2015-CUFT-16B 0.5-2	06/08/2016	Soil	
600-113063-1	2015-SDA-3C 0-0.5	06/09/2015	Soil	
600-113063-4	ECO-8C 0-0.5	06/09/2015	Soil	
600-113063-7	ECO-8D 0-0.5	06/09/2015	Soil	
600-113063-10	2015-STB-6A 1-2	06/09/2015	Soil	
600-113063-11	2015-STB-6A 4-6	06/09/2015	Soil	
600-113063-12	2015-STB-6A 6-8	06/09/2015	Soil	
600-113063-13	2015-STB-6B 1-2	06/09/2015	Soil	
600-113063-16	2015-STB-6C 0.75-2	06/09/2015	Soil	MS/MSD
600-113063-19	DUP-03	06/09/2015	Soil	Parent sample 2015-STB-6C 0.75-2
600-113192-1	2015-SCC-16A 0-0.5	06/10/2015	Soil	
600-113192-4	2015-SCC-16B 0-0.5	06/10/2015	Soil	
600-113192-5	2015-SCC-16B 0.5-2	06/10/2015	Soil	
600-113192-7	2015-SCC-16C 0-0.5	06/10/2015	Soil	MS/MSD
600-113192-10	2015-SCC-16D 0.5-2	06/10/2015	Soil	
600-113192-12	Dup-04	06/10/2015	Soil	Parent sample 2015-SCC-16D 0.5-2
600-113192-13	SCC-5C 0.5-2	06/10/2015	Soil	
600-113192-15	D-11D 0-0.5	06/10/2015	Soil	
600-113192-18	D-11E 0-0.5	06/10/2015	Soil	
600-113192-21	D-11C 0.5-2	06/10/2015	Soil	
600-113192-22	D-11C 2-4	06/10/2015	Soil	MS/MSD
600-113192-23	DUP-06	06/10/2015	Soil	Parent sample D-11C 0.5-2
600-113192-24	2015-MW-17C 0-0.5	06/10/2015	Soil	
600-113192-27	2015-MW-17D 0.5-2	06/10/2015	Soil	
600-113192-28	2015-MW-17D 2-4	06/10/2015	Soil	MS/MSD
600-113192-30	ECO-5-A 0-0.5	06/10/2015	Soil	
600-113192-33	E-11C-C 0-0.5	06/10/2015	Soil	
600-113192-36	E-11C-D 0-0.5	06/10/2015	Soil	
600-113192-39	E-11C-B 2.4	06/10/2015	Soil	
600-113192-42	Equipment Blank	06/10/2015	Soil	
600-113192-43	SCC-5C 0-0.5	06/10/2015	Soil	
600-113214-1	2015-FFTA-08A 0-0.5	06/11/2015	Soil	MS/MSD
600-113214-5	2015-NDA-11 0-0.5	06/11/2015	Soil	MS/MSD
600-113214-8	DUP-07	06/11/2015	Soil	Parent sample 2015-NDA-11 0-0.5
600-113214-9	2015-NDA-12 0-0.5	06/11/2015	Soil	
600-113214-12	2015-NDA-13 0-0.5	06/11/2015	Soil	
600-113214-15	ECO-11A 0-0.5	06/11/2015	Soil	
600-113214-18	ECO-11B 0-0.5	06/11/2015	Soil	
600-113214-21	ECO-11C 0-0.5	06/11/2015	Soil	
600-113214-22	ECO-11C 0.5-2	6/11/2015	Soil	
600-113214-24	ECO-11D 0-0.5	06/11/2015	Soil	
600-113214-27	2015-C2L-06D 0-0.5	06/11/2015	Soil	
600-113214-30	2015-C2L-C01D-0-0.5	06/11/2015	Soil	MS/MSD
600-113214-32	DUP-09	06/11/2015	Soil	Parent sample 2015-C2L-C01D-0-0.5
600-113214-33	2015-FWCS-5A 0-0.5	06/11/2015	Soil	
600-113214-34	2015-FWCS-6A 0-0.5	06/11/2015	Soil	
600-113214-35	2015-FWCS-7A 0-0.5	06/11/2015	Soil	
600-113214-36	Equipment Blank2 Auger	06/11/2015	Soil	
600-113214-37	Equipment Blank2 Probe	06/11/2015	Soil	

TABLE 2 - QUALIFIED DATA

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifier	Explanation
600-113019-18	2015-C2L-06F 0-0.5	Antimony	0.958	mg/Kg	JL	Estimated concentration between SDL and MQL; low MS/MSD recovery
600-113019-18	2015-C2L-06F 0-0.5	Selenium	2.52	mg/Kg	J	Estimated concentration between SDL and MQL
600-113019-12	SRB-VS-7A 0-0.5	Antimony	<0.250	mg/Kg	UJL	low MS/MSD recovery
600-113019-15	SRB-VS-3A 0-0.5	Antimony	<0.263	mg/Kg	UJL	low MS/MSD recovery
600-113019-1	2015-CUFT-16A 0-0.5	Lead	69.0	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-5	2015-CUFT-15A 0-0.5	Lead	141	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-9	2015-CUFT-16C 2-4	Lead	104	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria; field duplicate RPD
600-113019-11	DUP-02	Lead	22.5	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria; field duplicate RPD
600-113019-18	2015-C2L-06F 0-0.5	Lead	221	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-21	B3RA-A 0-0.5	Lead	501	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria; field duplicate RPD
600-113019-22	DUP-01	Lead	75.9	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria; field duplicate RPD
600-113019-25	B3RA-B 0-0.5	Lead	95.6	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-28	B3RA-C 0-0.5	Lead	249	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-31	2015-C2L-06E 0-0.5	Lead	1100	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113019-34	2015-CUFT-16B 0-0.5	Lead	1020	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria
600-113063-1	2015-SDA-3C 0-0.5	Antimony	1.21	mg/Kg	J	Estimated concentration between SDL and MQL
600-113063-4	ECO-8C 0-0.5	Antimony	1.37	mg/Kg	J	Estimated concentration between SDL and MQL
600-113063-7	ECO-8D 0-0.5	Antimony	0.432	mg/Kg	J	Estimated concentration between SDL and MQL
600-113063-10	2015-STB-6A 1-2	Benzene	0.00124	mg/Kg	J	Estimated concentration between SDL and MQL
600-113063-16	2015-STB-6C 0.75-2	Benzene	0.000688	mg/Kg	J	Estimated concentration between SDL and MQL
600-113192-1	2015-SCC-16A 0-0.5	lead	582	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-4	2015-SCC-16B 0-0.5	lead	2010	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-5	2015-SCC-16B 0.5-2	lead	16.9	mg/kg	J	MSD/MD RPD outside of criteria
600-113192-7	2015-SCC-16C 0-0.5	lead	810	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-10	2015-SCC-16D 0.5-2	lead	40.8	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-12	Dup-04	lead	27.6	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-13	SCC-5C 0.5-2	Antimony	8.81	mg/Kg	JL	MS/MSD recoveries outside of criteria
600-113192-13	SCC-5C 0.5-2	lead	5160	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-21	D-11C 0.5-2	arsenic	16.9	mg/Kg	J	Field duplicate RPD
600-113192-23	DUP-06	arsenic	7.25	mg/Kg	J	Field duplicate RPD
600-113192-24	2015-MW-17C 0-0.5	Antimony	0.611	mg/Kg	J	Estimated concentration between SDL and MQL;
600-113192-24	2015-MW-17C 0-0.5	lead	42.2	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-27	2015-MW-17D 0.5-2	lead	1600	mg/Kg	J	MSD/MD RPD outside of criteria
600-113192-27	2015-MW-17D 0.5-2	Antimony	20.6	mg/Kg	JL	MS/MSD recoveries outside of criteria
600-113192-42	Equipment Blank	Lead	0.00405	mg/L	J	Estimated concentration between SDL and MQL
600-113192-43	SCC-5C 0-0.5	Antimony	2.05	mg/Kg	J	Estimated concentration between SDL and MQL
600-113192-28	2015-MW-17D 2-4	Antimony	<0.293	mg/kg	UJL	MS/MSD recoveries outside of criteria
600-113192-28	2015-MW-17D 2-4	Lead	101	mg/kg	J	MSD/MD RPD outside of criteria
600-113214-5	2015-NDA-11 0-0.5	lead	4440	mg/Kg	J	Field duplicate RPD
600-113214-8	DUP-07	lead	1120	mg/Kg	J	Field duplicate RPD
600-113214-30	2015-C2L-C01D-0-0.5	arsenic	7.8	mg/Kg	J	Field duplicate RPD
600-113214-32	DUP-09	arsenic	15.2	mg/Kg	J	Field duplicate RPD
600-113214-33	2015-FWCS-5A 0-0.5	Antimony	1.90	mg/Kg	JL	Estimated concentration between SDL and MQL; MS/MSD recoveries outside of criteria
600-113214-33	2015-FWCS-5A 0-0.5	Selenium	0.796	mg/Kg	J	Estimated concentration between SDL and MQL
600-113214-34	2015-FWCS-6A 0-0.5	Antimony	1.07	mg/Kg	JL	Estimated concentration between SDL and MQL; MS/MSD recoveries outside of criteria
600-113214-35	2015-FWCS-7A 0-0.5	Selenium	1.34	mg/Kg	J	Estimated concentration between SDL and MQL
600-113214-35	2015-FWCS-7A 0-0.5	Antimony	5.09	mg/Kg	JL	MS/MSD recoveries outside of criteria

Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data: The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data: The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected: Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data: The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

U Not detected: The analyte was not detected &gt;5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data: The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low

**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Lab Package	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added
Dup-01 / B3RA-A (0-0.5)	600-113019	lead	501	75.9	147.4	A	J
		arsenic	15	14	6.9	A	-
Dup-02 / 2015-CUFT-16C (2-4)	600-113019	lead	104	22.5	128.9	A	J
Dup-03 / 2015-STB-6C (0.75-2)	600-113063	benzene	0.000688 J	<0.000692	NC	A	-
Dup-04 / 2015-SCC-16D (0.5-2)	600-113192	lead	27.6	40.8	38.6	A	-
Dup-06 / D-11C (0.5-2)	600-113192	arsenic	16.9	7.25	79.9	A	J
Dup-07 / 2015-NDA-11 (0-0.5)	600-113214	lead	4440	1120	119.4	A	J
Dup-09 / 2015-C2L-C01D (0-0.5)	600-113214	arsenic	7.8	15.2	64.3	A	J

<sup>a</sup> RPD = ((SR - DR)\*200)/(SR + DR)

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.

NC - Not calculated if one or both results were non-detect

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113019-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/23/2015 6:25:36 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@testamericainc.com)

### LINKS

Review your project  
results through

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Have a Question?



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[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.*

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# Appendix A

## Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113019-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

6/23/2015

Date

Project Manager I

Official Title (printed)



# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?			X		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?			X		
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-1
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R01A	The following samples was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 2015-CUFT-16B 0-0.5 (600-113019-34), 2015-CUFT-16B 0.5-2 (600-113019-35), 2015-CUFT-16B 2-4 (600-113019-36) and 2015-CUFT-16B 4-6 (600-113019-37). See attached email.
R07C	Method 6010B: 600-113019-25 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected. Method 6010B: 600-113019-9 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.
R07D	Method 6010B: 600-113019-25 MSD failed the RPD criteria for the following analyte(s): Lead. Method 6010B: 600-113019-9 MSD failed the RPD criteria for the following analyte(s): Lead.
R08C	Method 6010B: 600-113019-9 DU failed the RPD criteria for the following analyte(s): Lead. Method 6010B: 600-113019-25 DU failed the RPD criteria for the following analyte(s): Cadmium, Lead.
R10B	Method 6010B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: 600-113019-1, 600-113019-5, 600-113019-9, 600-113019-9 DU, 600-113019-9 MS, 600-113019-9 MSD, 600-113019-11, 600-113019-18, 600-113019-21, 600-113019-22, 600-113019-25, 600-113019-25 DU, 600-113019-25 MS, 600-113019-25 MSD, 600-113019-28, 600-113019-31, and 600-113019-34. Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B & SW-846 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.330	0.4
Al	Thermo6500	0.300	0.500	0.510	25
As	Thermo6500	0.218	0.500	0.435	1
B	Thermo6500	0.386	0.600	0.585	20
Ba	Thermo6500	0.030	0.030	0.500	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	Thermo6500	0.864	2.500	3.305	100
Cd	Thermo6500	0.026	0.050	0.055	0.25
Co	Thermo6500	0.068	0.100	0.095	0.5
Cr	Thermo6500	0.051	0.100	0.145	0.5
Cu	Thermo6500	0.174	0.500	0.430	0.5
Fe	Thermo6500	2.534	4.000	5.370	20
K	Thermo6500	10.999	12.000	15.950	100
Li	Thermo6500	0.008	0.010	0.120	10
Mg	Thermo6500	1.921	3.000	4.500	100
Mn	Thermo6500	0.038	0.050	0.070	1.5
Mo	Thermo6500	0.136	0.350	0.400	0.5
Na	Thermo6500	0.886	2.400	7.500	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.245	0.5
Sb	Thermo6500	0.232	0.450	0.905	2.5
Se	Thermo6500	0.259	0.500	0.560	2
Si	Thermo6500	0.117	0.270	0.355	10
Sn	Thermo6500	0.087	0.150	0.075	1
Sr	Thermo6500	0.003	0.005	1.020	0.25
Ti	Thermo6500	0.015	0.030	0.050	0.5
Tl	Thermo6500	0.277	0.700	0.660	1.5
V	Thermo6500	0.079	0.150	0.125	0.5
Zn	Thermo6500	0.108	0.200	0.315	1.5

DCS = Detection Check Standard  
 MQL = Method Quantitation Limit

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Job ID: 600-113019-1**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-113019-1

### Comments

No additional comments.

### Receipt

The samples were received on 6/9/2015 10:14 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

### Receipt Exceptions

The following samples was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 2015-CUFT-16B 0-0.5 (600-113019-34), 2015-CUFT-16B 0.5-2 (600-113019-35), 2015-CUFT-16B 2-4 (600-113019-36) and 2015-CUFT-16B 4-6 (600-113019-37). See attached email.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113019-1	2015-CUFT-16A 0-0.5	Solid	06/08/15 09:25	06/09/15 10:14
600-113019-5	2015-CUFT-15A 0-0.5	Solid	06/08/15 09:50	06/09/15 10:14
600-113019-9	2015-CUFT-16C 2-4	Solid	06/08/15 13:55	06/09/15 10:14
600-113019-11	DUP-02	Solid	06/08/15 00:00	06/09/15 10:14
600-113019-12	SRB-VS-7A 0-0.5	Solid	06/08/15 10:45	06/09/15 10:14
600-113019-15	SRB-VS-3A 0-0.5	Solid	06/08/15 12:30	06/09/15 10:14
600-113019-18	2015-C2L-06F 0-0.5	Solid	06/08/15 15:00	06/09/15 10:14
600-113019-21	B3RA-A 0-0.5	Solid	06/08/15 12:55	06/09/15 10:14
600-113019-22	DUP-01	Solid	06/08/15 00:00	06/09/15 10:14
600-113019-25	B3RA-B 0-0.5	Solid	06/08/15 13:00	06/09/15 10:14
600-113019-28	B3RA-C 0-0.5	Solid	06/08/15 15:10	06/09/15 10:14
600-113019-31	2015-C2L-06E 0-0.5	Solid	06/08/15 14:45	06/09/15 10:14
600-113019-34	2015-CUFT-16B 0-0.5	Solid	06/08/15 09:50	06/09/15 10:14

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: 2015-CUFT-16A 0-0.5**

Date Collected: 06/08/15 09:25

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	77		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: 2015-CUFT-16A 0-0.5**

Date Collected: 06/08/15 09:25

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-1**

Matrix: Solid

Percent Solids: 77.3

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	69.0		6.34	1.33	mg/Kg	☼	06/17/15 10:57	06/18/15 13:04	10

**Client Sample ID: 2015-CUFT-15A 0-0.5**

Date Collected: 06/08/15 09:50

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-5**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	79		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: 2015-CUFT-15A 0-0.5**

Date Collected: 06/08/15 09:50

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-5**

Matrix: Solid

Percent Solids: 79.0

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	141		3.13	0.657	mg/Kg	☼	06/17/15 10:57	06/18/15 13:07	5

**Client Sample ID: 2015-CUFT-16C 2-4**

Date Collected: 06/08/15 13:55

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-9**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	72		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: 2015-CUFT-16C 2-4**

Date Collected: 06/08/15 13:55

Date Received: 06/09/15 10:14

**Lab Sample ID: 600-113019-9**

Matrix: Solid

Percent Solids: 71.8

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	104		3.17	0.664	mg/Kg	☼	06/17/15 10:57	06/17/15 20:42	5

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: DUP-02**

**Date Collected: 06/08/15 00:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-11**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	79		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: DUP-02**

**Date Collected: 06/08/15 00:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-11**

**Matrix: Solid**

**Percent Solids: 78.6**

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	22.5		3.03	0.635	mg/Kg	☼	06/17/15 10:57	06/18/15 13:09	5

**Client Sample ID: SRB-VS-7A 0-0.5**

**Date Collected: 06/08/15 10:45**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-12**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	86		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: SRB-VS-7A 0-0.5**

**Date Collected: 06/08/15 10:45**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-12**

**Matrix: Solid**

**Percent Solids: 86.5**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.250	U	2.70	0.250	mg/Kg	☼	06/17/15 10:57	06/17/15 18:35	1
Arsenic	14.8		1.08	0.236	mg/Kg	☼	06/17/15 10:57	06/17/15 18:35	1

**Client Sample ID: SRB-VS-3A 0-0.5**

**Date Collected: 06/08/15 12:30**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-15**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	85		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: SRB-VS-3A 0-0.5**

**Date Collected: 06/08/15 12:30**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-15**

**Matrix: Solid**

**Percent Solids: 84.7**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.263	U	2.84	0.263	mg/Kg	☼	06/17/15 10:57	06/17/15 18:37	1
Arsenic	10.7		1.14	0.247	mg/Kg	☼	06/17/15 10:57	06/17/15 18:37	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: 2015-C2L-06F 0-0.5**

**Lab Sample ID: 600-113019-18**

Date Collected: 06/08/15 15:00

Matrix: Solid

Date Received: 06/09/15 10:14

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	76		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: 2015-C2L-06F 0-0.5**

**Lab Sample ID: 600-113019-18**

Date Collected: 06/08/15 15:00

Matrix: Solid

Date Received: 06/09/15 10:14

Percent Solids: 75.8

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.958	J	3.17	0.294	mg/Kg	☼	06/17/15 10:57	06/17/15 18:39	1
Arsenic	18.8		1.27	0.277	mg/Kg	☼	06/17/15 10:57	06/17/15 18:39	1
Selenium	2.52	J	2.54	0.329	mg/Kg	☼	06/17/15 10:57	06/17/15 18:39	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	221		3.17	0.665	mg/Kg	☼	06/17/15 10:57	06/18/15 13:16	5

**Client Sample ID: B3RA-A 0-0.5**

**Lab Sample ID: 600-113019-21**

Date Collected: 06/08/15 12:55

Matrix: Solid

Date Received: 06/09/15 10:14

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	81		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: B3RA-A 0-0.5**

**Lab Sample ID: 600-113019-21**

Date Collected: 06/08/15 12:55

Matrix: Solid

Date Received: 06/09/15 10:14

Percent Solids: 81.3

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.0		1.22	0.265	mg/Kg	☼	06/17/15 10:57	06/17/15 18:49	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	501		3.04	0.638	mg/Kg	☼	06/17/15 10:57	06/18/15 13:18	5

**Client Sample ID: DUP-01**

**Lab Sample ID: 600-113019-22**

Date Collected: 06/08/15 00:00

Matrix: Solid

Date Received: 06/09/15 10:14

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			06/11/15 08:19	1
Percent Solids	80		1.0	1.0	%			06/11/15 08:19	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: DUP-01**

**Date Collected: 06/08/15 00:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-22**

**Matrix: Solid**

**Percent Solids: 80.0**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.0		1.18	0.257	mg/Kg	☼	06/17/15 10:57	06/17/15 18:51	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	75.9		2.95	0.618	mg/Kg	☼	06/17/15 10:57	06/18/15 13:20	5

**Client Sample ID: B3RA-B 0-0.5**

**Date Collected: 06/08/15 13:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-25**

**Matrix: Solid**

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			06/10/15 19:39	1
Percent Solids	83		1.0	1.0	%			06/10/15 19:39	1

**Client Sample ID: B3RA-B 0-0.5**

**Date Collected: 06/08/15 13:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-25**

**Matrix: Solid**

**Percent Solids: 83.1**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.0		1.16	0.252	mg/Kg	☼	06/17/15 10:57	06/17/15 18:53	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	95.6		2.89	0.606	mg/Kg	☼	06/17/15 10:57	06/18/15 13:23	5

**Client Sample ID: B3RA-C 0-0.5**

**Date Collected: 06/08/15 15:10**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-28**

**Matrix: Solid**

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			06/10/15 18:56	1
Percent Solids	82		1.0	1.0	%			06/10/15 18:56	1

**Client Sample ID: B3RA-C 0-0.5**

**Date Collected: 06/08/15 15:10**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-28**

**Matrix: Solid**

**Percent Solids: 81.8**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.7		1.15	0.251	mg/Kg	☼	06/17/15 10:57	06/17/15 19:03	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	249		5.76	1.21	mg/Kg	☼	06/17/15 10:57	06/18/15 13:39	10

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: 2015-C2L-06E 0-0.5**

**Lab Sample ID: 600-113019-31**

Date Collected: 06/08/15 14:45

Matrix: Solid

Date Received: 06/09/15 10:14

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			06/10/15 18:56	1
Percent Solids	87		1.0	1.0	%			06/10/15 18:56	1

**Client Sample ID: 2015-C2L-06E 0-0.5**

**Lab Sample ID: 600-113019-31**

Date Collected: 06/08/15 14:45

Matrix: Solid

Date Received: 06/09/15 10:14

Percent Solids: 87.4

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1100		5.50	1.15	mg/Kg	☼	06/17/15 10:57	06/18/15 13:41	10

**Client Sample ID: 2015-CUFT-16B 0-0.5**

**Lab Sample ID: 600-113019-34**

Date Collected: 06/08/15 09:50

Matrix: Solid

Date Received: 06/09/15 10:14

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/11/15 08:19	1
Percent Solids	79		1.0	1.0	%			06/11/15 08:19	1

**Client Sample ID: 2015-CUFT-16B 0-0.5**

**Lab Sample ID: 600-113019-34**

Date Collected: 06/08/15 09:50

Matrix: Solid

Date Received: 06/09/15 10:14

Percent Solids: 79.0

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1020		2.90	0.609	mg/Kg	☼	06/17/15 10:57	06/18/15 13:43	5



## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the control limits

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-164854/1-A

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 164854

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/17/15 10:57	06/17/15 15:28	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/17/15 10:57	06/17/15 15:28	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/17/15 10:57	06/17/15 15:28	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/17/15 10:57	06/17/15 15:28	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/17/15 10:57	06/17/15 15:28	1

Lab Sample ID: LCSSRM 600-164854/2-A

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	108	74.92		mg/Kg		69.4	0.9 - 214.8
Arsenic	151	151.1		mg/Kg		100.1	80.8 - 119.9
Cadmium	152	153.6		mg/Kg		101.1	81.6 - 117.8
Lead	254	244.2		mg/Kg		96.1	81.5 - 120.9
Selenium	162	166.5		mg/Kg		102.8	77.2 - 122.2

Lab Sample ID: 600-113019-9 MS

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.293	U	66.3	22.69	N1	mg/Kg	☼	34	75 - 125
Arsenic	14.4		66.3	76.90		mg/Kg	☼	94	75 - 125
Cadmium	0.697		33.2	33.88		mg/Kg	☼	100	75 - 125
Selenium	0.328	U	66.3	61.98		mg/Kg	☼	93	75 - 125

Lab Sample ID: 600-113019-9 MSD

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.293	U	64.5	22.18	N1	mg/Kg	☼	34	75 - 125	2	20
Arsenic	14.4		64.5	76.37		mg/Kg	☼	96	75 - 125	1	20
Cadmium	0.697		32.3	32.54		mg/Kg	☼	99	75 - 125	4	20
Selenium	0.328	U	64.5	59.36		mg/Kg	☼	92	75 - 125	4	20

Lab Sample ID: 600-113019-25 MS

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.268	U	60.1	19.59	N1	mg/Kg	☼	33	75 - 125
Arsenic	13.0		60.1	71.74		mg/Kg	☼	98	75 - 125
Cadmium	0.642		30.1	30.34		mg/Kg	☼	99	75 - 125

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

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

Lab Sample ID: 600-113019-25 MS

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	0.299	U	60.1	57.31		mg/Kg	☼	95	75 - 125

Lab Sample ID: 600-113019-25 MSD

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.268	U	57.3	18.26	N1	mg/Kg	☼	32	75 - 125	7	20
Arsenic	13.0		57.3	67.81		mg/Kg	☼	96	75 - 125	6	20
Cadmium	0.642		28.6	28.63		mg/Kg	☼	98	75 - 125	6	20
Selenium	0.299	U	57.3	53.13		mg/Kg	☼	93	75 - 125	8	20

Lab Sample ID: 600-113019-9 DU

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.293	U	0.302	U	mg/Kg	☼	NC	20
Arsenic	14.4		14.29		mg/Kg	☼	0.5	20
Cadmium	0.697		0.6381		mg/Kg	☼	9	20
Selenium	0.328	U	0.337	U	mg/Kg	☼	NC	20

Lab Sample ID: 600-113019-25 DU

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.268	U	0.270	U	mg/Kg	☼	NC	20
Arsenic	13.0		13.56		mg/Kg	☼	4	20
Cadmium	0.642		0.4787		mg/Kg	☼	29	20
Selenium	0.299	U	0.302	U	mg/Kg	☼	NC	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-113019-9 MS

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	104		66.3	189.0	N1	mg/Kg	☼	129	75 - 125

Lab Sample ID: 600-113019-9 MSD

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead - DL	104		64.5	118.7	N1 N2	mg/Kg	☼	23	75 - 125	46	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

## Method: 6010B - Metals (ICP) - DL (Continued)

Lab Sample ID: 600-113019-25 MS

Matrix: Solid

Analysis Batch: 164978

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	95.6		60.1	114.1	N1	mg/Kg	☼	31	75 - 125

Lab Sample ID: 600-113019-25 MSD

Matrix: Solid

Analysis Batch: 164978

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead - DL	95.6		57.3	172.5	N1 N2	mg/Kg	☼	134	75 - 125	41	20

Lab Sample ID: 600-113019-9 DU

Matrix: Solid

Analysis Batch: 164871

Client Sample ID: 2015-CUFT-16C 2-4

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	104		45.67	F	mg/Kg	☼	78	20

Lab Sample ID: 600-113019-25 DU

Matrix: Solid

Analysis Batch: 164978

Client Sample ID: B3RA-B 0-0.5

Prep Type: Total/NA

Prep Batch: 164854

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	95.6		52.63	F	mg/Kg	☼	58	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113019-12 DU

Matrix: Solid

Analysis Batch: 164356

Client Sample ID: SRB-VS-7A 0-0.5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	14		13		%		2	20
Percent Solids	86		87		%		0.3	20

Lab Sample ID: 600-113019-22 DU

Matrix: Solid

Analysis Batch: 164383

Client Sample ID: DUP-01

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	20		20		%		0.06	20
Percent Solids	80		80		%		0	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B
Selenium	2.00	0.259	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

## Metals

### Prep Batch: 164854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-1 - DL	2015-CUFT-16A 0-0.5	Total/NA	Solid	3050B	
600-113019-5 - DL	2015-CUFT-15A 0-0.5	Total/NA	Solid	3050B	
600-113019-9 - DL	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 DU	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 DU - DL	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 MS - DL	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 MS	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 MSD - DL	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-9 MSD	2015-CUFT-16C 2-4	Total/NA	Solid	3050B	
600-113019-11 - DL	DUP-02	Total/NA	Solid	3050B	
600-113019-12	SRB-VS-7A 0-0.5	Total/NA	Solid	3050B	
600-113019-15	SRB-VS-3A 0-0.5	Total/NA	Solid	3050B	
600-113019-18 - DL	2015-C2L-06F 0-0.5	Total/NA	Solid	3050B	
600-113019-18	2015-C2L-06F 0-0.5	Total/NA	Solid	3050B	
600-113019-21	B3RA-A 0-0.5	Total/NA	Solid	3050B	
600-113019-21 - DL	B3RA-A 0-0.5	Total/NA	Solid	3050B	
600-113019-22	DUP-01	Total/NA	Solid	3050B	
600-113019-22 - DL	DUP-01	Total/NA	Solid	3050B	
600-113019-25	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 - DL	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 DU - DL	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 DU	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 MS	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 MS - DL	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 MSD - DL	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-25 MSD	B3RA-B 0-0.5	Total/NA	Solid	3050B	
600-113019-28	B3RA-C 0-0.5	Total/NA	Solid	3050B	
600-113019-28 - DL	B3RA-C 0-0.5	Total/NA	Solid	3050B	
600-113019-31 - DL	2015-C2L-06E 0-0.5	Total/NA	Solid	3050B	
600-113019-34 - DL	2015-CUFT-16B 0-0.5	Total/NA	Solid	3050B	
LCSSRM 600-164854/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-164854/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 164871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-9 - DL	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 DU	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 DU - DL	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 MS	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 MS - DL	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 MSD	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-9 MSD - DL	2015-CUFT-16C 2-4	Total/NA	Solid	6010B	164854
600-113019-12	SRB-VS-7A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-15	SRB-VS-3A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-18	2015-C2L-06F 0-0.5	Total/NA	Solid	6010B	164854
600-113019-21	B3RA-A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-22	DUP-01	Total/NA	Solid	6010B	164854
600-113019-25	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 DU	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 MS	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 MSD	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

## Metals (Continued)

### Analysis Batch: 164871 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-28	B3RA-C 0-0.5	Total/NA	Solid	6010B	164854
LCSSRM 600-164854/2-A	Lab Control Sample	Total/NA	Solid	6010B	164854
MB 600-164854/1-A	Method Blank	Total/NA	Solid	6010B	164854

### Analysis Batch: 164978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-1 - DL	2015-CUFT-16A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-5 - DL	2015-CUFT-15A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-11 - DL	DUP-02	Total/NA	Solid	6010B	164854
600-113019-18 - DL	2015-C2L-06F 0-0.5	Total/NA	Solid	6010B	164854
600-113019-21 - DL	B3RA-A 0-0.5	Total/NA	Solid	6010B	164854
600-113019-22 - DL	DUP-01	Total/NA	Solid	6010B	164854
600-113019-25 - DL	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 DU - DL	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 MS - DL	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-25 MSD - DL	B3RA-B 0-0.5	Total/NA	Solid	6010B	164854
600-113019-28 - DL	B3RA-C 0-0.5	Total/NA	Solid	6010B	164854
600-113019-31 - DL	2015-C2L-06E 0-0.5	Total/NA	Solid	6010B	164854
600-113019-34 - DL	2015-CUFT-16B 0-0.5	Total/NA	Solid	6010B	164854

## General Chemistry

### Analysis Batch: 164356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-1	2015-CUFT-16A 0-0.5	Total/NA	Solid	Moisture	
600-113019-5	2015-CUFT-15A 0-0.5	Total/NA	Solid	Moisture	
600-113019-9	2015-CUFT-16C 2-4	Total/NA	Solid	Moisture	
600-113019-9 MS	2015-CUFT-16C 2-4	Total/NA	Solid	Moisture	
600-113019-9 MSD	2015-CUFT-16C 2-4	Total/NA	Solid	Moisture	
600-113019-11	DUP-02	Total/NA	Solid	Moisture	
600-113019-12	SRB-VS-7A 0-0.5	Total/NA	Solid	Moisture	
600-113019-12 DU	SRB-VS-7A 0-0.5	Total/NA	Solid	Moisture	
600-113019-15	SRB-VS-3A 0-0.5	Total/NA	Solid	Moisture	
600-113019-18	2015-C2L-06F 0-0.5	Total/NA	Solid	Moisture	
600-113019-21	B3RA-A 0-0.5	Total/NA	Solid	Moisture	
600-113019-25	B3RA-B 0-0.5	Total/NA	Solid	Moisture	
600-113019-25 MS	B3RA-B 0-0.5	Total/NA	Solid	Moisture	
600-113019-25 MSD	B3RA-B 0-0.5	Total/NA	Solid	Moisture	
600-113019-28	B3RA-C 0-0.5	Total/NA	Solid	Moisture	
600-113019-31	2015-C2L-06E 0-0.5	Total/NA	Solid	Moisture	

### Analysis Batch: 164383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-22	DUP-01	Total/NA	Solid	Moisture	
600-113019-22 DU	DUP-01	Total/NA	Solid	Moisture	
600-113019-34	2015-CUFT-16B 0-0.5	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: 2015-CUFT-16A 0-0.5**

**Date Collected: 06/08/15 09:25**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-1**

**Matrix: Solid**

**Percent Solids: 77.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.02 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.02 g	50 mL	164978	06/18/15 13:04	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-15A 0-0.5**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-5**

**Matrix: Solid**

**Percent Solids: 79.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.01 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.01 g	50 mL	164978	06/18/15 13:07	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-16C 2-4**

**Date Collected: 06/08/15 13:55**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-9**

**Matrix: Solid**

**Percent Solids: 71.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.10 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.10 g	50 mL	164871	06/17/15 20:42	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: DUP-02**

**Date Collected: 06/08/15 00:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-11**

**Matrix: Solid**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	164978	06/18/15 13:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: SRB-VS-7A 0-0.5**

**Date Collected: 06/08/15 10:45**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-12**

**Matrix: Solid**

**Percent Solids: 86.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	164871	06/17/15 18:35	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: SRB-VS-3A 0-0.5**

**Lab Sample ID: 600-113019-15**

**Date Collected: 06/08/15 12:30**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

**Percent Solids: 84.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	164871	06/17/15 18:37	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06F 0-0.5**

**Lab Sample ID: 600-113019-18**

**Date Collected: 06/08/15 15:00**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

**Percent Solids: 75.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	164871	06/17/15 18:39	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	164978	06/18/15 13:16	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: B3RA-A 0-0.5**

**Lab Sample ID: 600-113019-21**

**Date Collected: 06/08/15 12:55**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

**Percent Solids: 81.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	164871	06/17/15 18:49	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.01 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.01 g	50 mL	164978	06/18/15 13:18	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: DUP-01**

**Lab Sample ID: 600-113019-22**

**Date Collected: 06/08/15 00:00**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

**Percent Solids: 80.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	164871	06/17/15 18:51	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	164978	06/18/15 13:20	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164383	06/11/15 08:19	MJB	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

**Client Sample ID: B3RA-B 0-0.5**

**Date Collected: 06/08/15 13:00**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-25**

**Matrix: Solid**

**Percent Solids: 83.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	164871	06/17/15 18:53	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	164978	06/18/15 13:23	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 19:39	MJB	TAL HOU

**Client Sample ID: B3RA-C 0-0.5**

**Date Collected: 06/08/15 15:10**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-28**

**Matrix: Solid**

**Percent Solids: 81.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	164871	06/17/15 19:03	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.06 g	50 mL	164978	06/18/15 13:39	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 18:56	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06E 0-0.5**

**Date Collected: 06/08/15 14:45**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-31**

**Matrix: Solid**

**Percent Solids: 87.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.04 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.04 g	50 mL	164978	06/18/15 13:41	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164356	06/10/15 18:56	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-16B 0-0.5**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-34**

**Matrix: Solid**

**Percent Solids: 79.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.09 g	50 mL	164854	06/17/15 10:57	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	164978	06/18/15 13:43	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164383	06/11/15 08:19	MJB	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

TestAmerica Houston

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

600-113019 Chain of Custody



TestAmerica  
713-690-4444 FAX 713-690-5646

<b>Client Information</b> Client Contact: Anne Fraeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afraeth@golder.com Project Name: Exide Recycling Center, Finesco TX Site: Exide Recycling Center, Finesco TX		Sampler: Jina Saq XI Phone: (732) 416 3888 Lab PM: Upton, Cathy L E-Mail: cathy.upton@testamerica.com		COC No: 600-36678-12035.1 Page 1 of 3	
Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #:		<b>Analysis Requested</b> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 8260B - Target Compound List Moisture - Local Method 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 8260B - (MOD) Target Compound List 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 6010B - Pb only Total Number of containers:			
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=Water, S=solid, O=organic, A=Asphalt) Preservation Code:		Special Instructions/Note:			
2015 - CuFT - 16A 0-0.5 2015 - CuFT - 16A 0.5-2 2015 - CuFT - 16A 2-4 2015 - CuFT - 16A 4-6 2015 - CuFT - 15A 0-0.5 2015 - CuFT - 15A 0.5-2 2015 - CuFT - 15A 2-4 2015 - CuFT - 15A 4-6 2015 - CuFT - 16C 2-4 2015 - CuFT - 16C 4-6 DP-02		6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 0925 G Solid N 6/8/15 1355 G Solid N 6/8/15 1355 G Solid N 6/8/15 - G Water N			
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:			
Relinquished by: Jina Saq XI		Date/Time: 6/8/15 1645		Received by: [Signature]	
Relinquished by:		Date/Time:		Received by:	
Relinquished by:		Date/Time:		Received by:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



# TestAmerica Houston

6316 Redway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

# TestAmerica

<b>Client Information</b>		Sample	Lab PM		Carrier Tracking No(s)	
Client Contact: Anne Fraeth-Boyd		Jim G S-16 X1	Upton, Cathy L		600-366/8-12035, 1	
Company: Goldier Associates Inc.		Phone: (832) 416 3868	E-Mail: cathy.upton@testamericainc.com		Page 2 of 3	
Address: 820 South Main Street Suite 100		Due Date Requested:	TAT Requested (days):		Job #	
City: St. Charles		10 Days		Preservation Codes:		
State, Zip: MO, 63301		PO #:	Purchase Order Requested		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsHAc2 P - Na2OAS Q - Na2SO4 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (Specify)	
Email: afaeth@golder.com		WO #:	Other:			
Project Name: Exide Recycling Center, Frisco TX		Project #:	Exide Recycling Center, Frisco TX			
Site: Exide Recycling Center, Frisco TX		SSOW#:	Exide Recycling Center, Frisco TX			
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, L=liquid, A=air)	Field Filtered Sample (Yes or No)
SRB-VS-7A	0-0-5	6/8/15	1045	G	Solid	N
SRB-VS-7A	0-5-2	6/8/15	1045	G	Solid	N
SRB-VS-7A	2-4	6/8/15	1045	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1230	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1230	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1230	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1500	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1500	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1500	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N

# TestAmerica Houston

6510 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

**TestAmerica**  
11000 Katy Freeway, Suite 100  
Houston, TX 77054  
Phone (713) 690-4444 Fax (713) 690-5646

<b>Client Information</b>		Sampler: <u>Jing Song X1</u>	Lab PM: <u>Upton, Cathy L</u>	COC No: <u>600-38678-12035.1</u>
Client Contact: <u>Anne Faeth-Boyd</u>		Phone: <u>(632) 446 3888</u>	E-Mail: <u>cathy.upton@testamerica.com</u>	Page: <u>3</u> of <u>3</u>
Company: <u>Goldier Associates Inc.</u>		Carrier Tracking No(s):		
Address: <u>820 South Main Street Suite 100</u>		Job #:		
City: <u>St. Charles</u>		Due Date Requested:		
State, Zip: <u>MO, 63301</u>		TAT Requested (days): <u>10 Days</u>		
Phone: <u>638-724-9191</u>		PO #: <u>Purchase Order Requested</u>		
Email: <u>afaeth@goldier.com</u>		Project #: <u>60006523</u>		
Project Name: <u>Exide Recycling Center Frisco TX</u>		SSOW#: <u></u>		
Site: <u>Exide Recycling Center Frisco TX</u>		Field Filtered Sample (Yes or No): <u>X</u>		
Sample Identification		Sample Date	Sample Time	Sample Type (G=grab, I=inst, S=spill, O=other)
B3A-A 0-5-2		6/8/15	1255	G Solid
B3A-A 2-4		6/8/15	1255	G Solid
B3A-B 0-0-5		6/8/15	1300	G Solid
B3A-B 0-5-2		6/8/15	1300	G Solid
B3A-B 2-4		6/8/15	1300	G Solid
B3A-C 0-0-5		6/8/15	1510	G Solid
B3A-C 0-5-2		6/8/15	1510	G Solid
B3A-C 2-4		6/8/15	1510	G Solid
B3A-C 0-0-5		6/8/15	1445	G Solid
B3A-C 0-5-2		6/8/15	1445	G Solid
B3A-C 2-4		6/8/15	1445	G Water
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
Deliverable Requested: I, II, III, IV, Other (Specify):		Special Instructions/QC Requirements:		
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:
Relinquished by: <u>Jing Song X1</u>		Date/Time: <u>6/8/15 1645</u>	Company: <u>Goldier</u>	Received by: <u>[Signature]</u>
Relinquished by:		Date/Time:	Company:	Received by:
Relinquished by:		Date/Time:	Company:	Received by:
Custody Seals Intact: <u>Δ Yes Δ No</u>		Cooler Temperature(s) °C and Other Remarks:		



**Upton, Cathy**

---

**From:** Xi, Jing Song [JingSong\_Xi@golder.com]  
**Sent:** Wednesday, June 10, 2015 8:23 PM  
**To:** Xi, Jing Song; Faeth-Boyd, Anne; Upton, Cathy  
**Subject:** RE: Exide June 8 2015  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Sent via the Samsung Galaxy S® 6, an AT&T 4G LTE smartphone

----- Original message -----

From: "Xi, Jing Song" <JingSong\_Xi@golder.com>  
Date: 06/10/2015 5:39 PM (GMT-06:00)  
To: cathy.upton@testamerica.com, "Faeth-Boyd, Anne" <Anne\_Faeth-Boyd@golder.com>  
Subject: Exide June 8 2015

Hello, looking back at the COCS I appear to have accidentally left 4 samples off the list.

They are:

2015-CUFT-16B 0-0.5'  
2015-CUFT-16B 0.5'-2' HOLD  
2015-CUFT-16B 2'-4' HOLD  
2015-CUFT-16B 4'-6' HOLD

All sampled 6/8/2015, 0950. Pb only.

Sorry about the mix up.

Sent via the Samsung Galaxy S® 6, an AT&T 4G LTE smartphone

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113019-1

**Login Number: 113019**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.2
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.	False	Received extra samples not listed on COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113019-3

Client Project/Site: Exide Recycling Center, Frisco TX

Revision: 1

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

7/30/2015 4:38:55 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113019-3 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jeanette Castillo, for Cathy Upton

Name (printed)



Signature

7/30/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/30/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/30/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/30/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113019-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

ER # <sup>1</sup>	Description
R01A	The following samples was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 2015-CUFT-16B 0.5-2 (600-113019-35).
R10B	Method 6010B: The following sample was diluted to bring the concentration of lead within the calibration range: 2015-CUFT-16B 0.5-2 (600-113019-35). Elevated reporting limits (RLs) are provided.
	<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5



## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

**Job ID: 600-113019-3**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-113019-3

#### Comments

The report was revised on 7/30/15 to report lead only in the client sample, replacing the final report generated on 7/27/15.

#### Receipt

The samples were received on 6/9/2015 10:14 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

#### Receipt Exceptions

The following samples was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 2015-CUFT-16B 0.5-2 (600-113019-35).

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113019-35	2015-CUFT-16B 0.5-2	Solid	06/08/15 09:50	06/09/15 10:14

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## Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

**Client Sample ID: 2015-CUFT-16B 0.5-2**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-35**

**Matrix: Solid**

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28	H	1.0	1.0	%			07/21/15 17:11	1
Percent Solids	72	H	1.0	1.0	%			07/21/15 17:11	1

**Client Sample ID: 2015-CUFT-16B 0.5-2**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-35**

**Matrix: Solid**

**Percent Solids: 72.0**

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	17.0		3.40	0.714	mg/Kg	☼	07/23/15 12:10	07/24/15 16:51	5

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
U	Analyte was not detected at or above the SDL.

#### General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-167594/1-A  
Matrix: Solid  
Analysis Batch: 167744

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 167594

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg	-	07/23/15 12:10	07/24/15 14:11	1

Lab Sample ID: LCSSRM 600-167594/2-A  
Matrix: Solid  
Analysis Batch: 167744

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 167594

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	90.1	84.22		mg/Kg	-	93.5	81.7 - 118.8

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-115087-A-1-G MS ^2  
Matrix: Solid  
Analysis Batch: 167744

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 167594

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	0.353	J	49.0	41.16		mg/Kg	-	83	75 - 125

Lab Sample ID: 600-115087-A-1-H MSD ^2  
Matrix: Solid  
Analysis Batch: 167744

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 167594

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead - DL	0.873	J	47.6	45.34		mg/Kg	-	93	75 - 125	10	20

Lab Sample ID: 600-115087-A-1-F DU ^2  
Matrix: Solid  
Analysis Batch: 167744

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 167594

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	0.873	J	0.8519	J	mg/Kg	-	2	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113192-A-5 DU  
Matrix: Solid  
Analysis Batch: 167427

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	20		20		%	-	2	20
Percent Solids	80		80		%	-	0.5	20

TestAmerica Houston



## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

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

Analyte	MQL	MDL	Units	Method
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

## Metals

### Prep Batch: 167594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-35 - DL	2015-CUFT-16B 0.5-2	Total/NA	Solid	3050B	
600-115087-A-1-F DU	Duplicate	Total/NA	Solid	3050B	
600-115087-A-1-F DU ^2 - D	Duplicate	Total/NA	Solid	3050B	
600-115087-A-1-G MS ^2 - C	Matrix Spike	Total/NA	Solid	3050B	
600-115087-A-1-H MSD ^2 -	Matrix Spike Duplicate	Total/NA	Solid	3050B	
600-115154-B-1-B DU	Duplicate	Total/NA	Solid	3050B	
LCSSRM 600-167594/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-167594/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 167744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-35 - DL	2015-CUFT-16B 0.5-2	Total/NA	Solid	6010B	167594
600-115087-A-1-F DU	Duplicate	Total/NA	Solid	6010B	167594
600-115087-A-1-F DU ^2 - D	Duplicate	Total/NA	Solid	6010B	167594
600-115087-A-1-G MS ^2 - C	Matrix Spike	Total/NA	Solid	6010B	167594
600-115087-A-1-H MSD ^2 -	Matrix Spike Duplicate	Total/NA	Solid	6010B	167594
600-115154-B-1-B DU	Duplicate	Total/NA	Solid	6010B	167594
LCSSRM 600-167594/2-A	Lab Control Sample	Total/NA	Solid	6010B	167594
MB 600-167594/1-A	Method Blank	Total/NA	Solid	6010B	167594

## General Chemistry

### Analysis Batch: 167427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-35	2015-CUFT-16B 0.5-2	Total/NA	Solid	Moisture	
600-113192-A-5 DU	Duplicate	Total/NA	Solid	Moisture	
600-113192-A-28 MS	Matrix Spike	Total/NA	Solid	Moisture	
600-113192-A-28 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

**Client Sample ID: 2015-CUFT-16B 0.5-2**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-35**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			167427	07/21/15 17:11	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-16B 0.5-2**

**Date Collected: 06/08/15 09:50**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-35**

**Matrix: Solid**

**Percent Solids: 72.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.02 g	50 mL	167594	07/23/15 12:10	DCL	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.02 g	50 mL	167744	07/24/15 16:51	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113019-3

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

600-113019 Chain of Custody



TestAmerica  
713-690-4444 FAX 713-690-5646

<b>Client Information</b> Client Contact: Anne Fraeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afraeth@golder.com Project Name: Exide Recycling Center, Finco TX Site: Exide Recycling Center, Finco TX		Sampler: Jmg SAC XI Phone: (732) 416 3888 Lab PM: Upton, Cathy L. E-Mail: cathy.upton@testamerica.com		COC No: 600-56878-12035.1 Page 1 of 3	
Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #:		<b>Analysis Requested</b> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 8260B - Target Compound List Moisture - Local Method 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 8260B - (MOD) Target Compound List 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 6010B - Pb only Total Number of containers:			
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=Water, S=solid, O=organic, BT=trace, A=Al)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ascorbic Acid H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA Other:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/Note: Special Instructions/QC Requirements: Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____ Relinquished by: Jmg 2016 XI Date/Time: 6/8/15 1645 Company: Golder. Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks:		Received by: _____ Date/Time: 6/9/15 1804 Company: (signature) Received by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____			

## Chain of Custody Record

6315 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

# Is America

[illegible]



# TestAmerica Houston

6510 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

**TestAmerica**  
11000 Katy Road, Suite 100, Houston, TX 77054  
Phone: (713) 690-4444 Fax: (713) 690-5646

<b>Client Information</b>		Sampler:	Jing Song X1		Lab PM:	Upton, Cathy L		COC No:	600-38678-12035.1	
Client Contact:		Phone:	(532) 466 3888		E-Mail:	cathy.upton@testamerica.com		Page:	3 of 3	
Company:		Goldier Associates Inc.		Due Date Requested:		10 Days		Analysis Requested		
Address:		820 South Main Street Suite 100		TAT Requested (days):				<input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No)		
City:		St. Charles		PO #		Purchase Order Requested		8260B - Target Compound List Moisture - Local Method 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 8260B - (MOD) Target Compound List 6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb 6010B Pb 6010B As 6010B Se 6010B Sb		
State, Zip:		MO, 63301		Project #		80006523		Total Number of containers:		
Phone:		638-724-9191		SSOW#:				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anhydrous H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecyltriale U - Acetone V - MCAA W - pH 4.5 Z - other (specify)		
Email:		ataeth@golider.com		Project Name:		Exide Recycling Center Frisco TX		Special Instructions/Note:		
Exide Recycling Center Frisco TX				Exide Recycling Center Frisco TX						
Exide Recycling Center Frisco TX				Exide Recycling Center Frisco TX						

Sample Identification	Sample Date	Sample Time	Sample Type (G=grab)	Matrix (W=water, S=solid, O=oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	Moisture - Local Method	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	8260B - (MOD) Target Compound List	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	6010B Pb	6010B As	6010B Se	6010B Sb	Total Number of containers	Special Instructions/Note
B3AA-A	0-5-2	6/8/15	125	G	Solid	N	X					X	X				hold
B3AA-A	2-4	6/8/15	125	G	Solid	N	X					X	X				hold
B3AA-B	0-0-5	6/8/15	1300	G	Solid	N	X					X	X				MS/MSD included
B3AA-B	0-5-2	6/8/15	1300	G	Solid	N	X					X	X				hold
B3AA-B	2-4	6/8/15	1300	G	Solid	N	X					X	X				hold
B3AA-C	0-0-5	6/8/15	1510	G	Solid	N	X					X	X				hold
B3AA-C	0-5-2	6/8/15	1510	G	Solid	N	X					X	X				hold
B3AA-C	2-4	6/8/15	1510	G	Solid	N	X					X	X				hold
B3AA-C	0-0-5	6/8/15	1445	G	Solid	N	X					X	X				Pb only
B3AA-C	0-5-2	6/8/15	1445	G	Solid	N	X					X	X				Pb only
B3AA-C	2-4	6/8/15	1445	G	Water	N	X					X	X				Pb only

Possible Hazard Identification		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>	
Deliverable Requested: I, II, III, IV, Other (specify):		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: Jing Song X1		Date/Time: 6/8/15 1645	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No:	

Sampled 2015 CWT-108-0-0.5	COMMENTS:
" " " "	
2-0.5-2 " " "	
4-2 " " "	
4-4 " " "	
not included on the chain	

**Upton, Cathy**

**From:** Faeth-Boyd, Anne [Anne\_Faeth-Boyd@golder.com]  
**Sent:** Sunday, July 19, 2015 11:42 PM  
**To:** Upton, Cathy  
**Cc:** Thomas, Jim; Higginbotham, Christina  
**Subject:** please run 5 hold samples  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy,

Can we please run the following hold samples:

ECO-11C (0.5-2) – arsenic and lead  
 2015-CUFT-16B (0.5-2) - lead  
 D-11C (2-4) - arsenic  
 2015-MW-17D (2-4) – antimony, arsenic, and lead  
 2015-SCC-16B (0.5-2) – lead

Thanks,  
 Anne

---

**Anne Faeth-Boyd, R.G., P.E.** | Senior Engineer | **Golder Associates Inc.**  
 820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301  
**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
[www.golder.com](http://www.golder.com)

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**Please consider the environment before printing this email.**

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113019-3

**Login Number: 113019**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.2
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.	False	Received extra samples not listed on COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040  
Tel: (713)690-4444

TestAmerica Job ID: 600-113019-4

Client Project/Site: Exide Recycling Center, FriscoTX Rush Pb

For:

Golder Associates Inc.  
500 Century Plaza Drive  
Suite 190  
Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:  
8/30/2015 7:55:29 PM

Cathy Upton, Project Manager I  
(713)690-4444  
[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113019-4 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

8/30/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/30/2015
Project Name:	Exide Recycling Center, FriscoTX Rush Pb	Laboratory Job Number:	600-113019-4
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?			X		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?			X		
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/30/2015
Project Name:	Exide Recycling Center, FriscoTX Rush Pb	Laboratory Job Number:	600-113019-4
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/30/2015
Project Name:	Exide Recycling Center, FriscoTX Rush Pb	Laboratory Job Number:	600-113019-4
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R10B	Method 6010B: The following sample was diluted to bring the concentration of lead within calibration range: 2015-CUFT-16C 4-6 (600-113019-10). Elevated reporting limits (RLs) are provided.
	<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



## Sample Summary

Client: Golder Associates Inc.

Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113019-10	2015-CUFT-16C 4-6	Solid	06/08/15 13:55	06/09/15 10:14

## Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

**Client Sample ID: 2015-CUFT-16C 4-6**

**Lab Sample ID: 600-113019-10**

**Date Collected: 06/08/15 13:55**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26	H	1.0	1.0	%			08/27/15 17:17	1
Percent Solids	74	H	1.0	1.0	%			08/27/15 17:17	1

**Client Sample ID: 2015-CUFT-16C 4-6**

**Lab Sample ID: 600-113019-10**

**Date Collected: 06/08/15 13:55**

**Matrix: Solid**

**Date Received: 06/09/15 10:14**

**Percent Solids: 74.5**

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	83.0		3.17	0.665	mg/Kg	☼	08/28/15 11:17	08/28/15 15:24	5

# Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

## Qualifiers

### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

### General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

## 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-170549/1-A  
Matrix: Solid  
Analysis Batch: 170557

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 170549

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		08/28/15 11:17	08/28/15 15:08	1

Lab Sample ID: LCSSRM 600-170549/2-A  
Matrix: Solid  
Analysis Batch: 170557

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 170549

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	90.1	89.69		mg/Kg		99.5	81.7 - 118.8

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-116529-A-10-K MS ^2  
Matrix: Solid  
Analysis Batch: 170557

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 170549

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	11.0		54.2	70.57		mg/Kg	☼	110	75 - 125

Lab Sample ID: 600-116529-A-10-J DU ^2  
Matrix: Solid  
Analysis Batch: 170557

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 170549

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	11.0		9.967		mg/Kg	☼	10	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-116713-A-12 DU  
Matrix: Solid  
Analysis Batch: 170480

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	19		19		%		0.2	20
Percent Solids	81		81		%		0	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.

TestAmerica Job ID: 600-113019-4

Project/Site: Exide Recycling Center, FriscoTX Rush Pb

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

Analyte	MQL	MDL	Units	Method
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

### Metals

#### Prep Batch: 170549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-10 - DL	2015-CUFT-16C 4-6	Total/NA	Solid	3050B	
600-116529-A-10-J DU ^2 - I	Duplicate	Total/NA	Solid	3050B	
600-116529-A-10-K MS ^2 -	Matrix Spike	Total/NA	Solid	3050B	
LCSSRM 600-170549/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-170549/1-A	Method Blank	Total/NA	Solid	3050B	

#### Analysis Batch: 170557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-10 - DL	2015-CUFT-16C 4-6	Total/NA	Solid	6010B	170549
600-116529-A-10-J DU ^2 - I	Duplicate	Total/NA	Solid	6010B	170549
600-116529-A-10-K MS ^2 -	Matrix Spike	Total/NA	Solid	6010B	170549
LCSSRM 600-170549/2-A	Lab Control Sample	Total/NA	Solid	6010B	170549
MB 600-170549/1-A	Method Blank	Total/NA	Solid	6010B	170549

### General Chemistry

#### Analysis Batch: 170480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113019-10	2015-CUFT-16C 4-6	Total/NA	Solid	Moisture	
600-116713-A-12 DU	Duplicate	Total/NA	Solid	Moisture	



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

**Client Sample ID: 2015-CUFT-16C 4-6**

**Date Collected: 06/08/15 13:55**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-10**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			170480	08/27/15 17:17	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-16C 4-6**

**Date Collected: 06/08/15 13:55**

**Date Received: 06/09/15 10:14**

**Lab Sample ID: 600-113019-10**

**Matrix: Solid**

**Percent Solids: 74.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	170549	08/28/15 11:17	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	170557	08/28/15 15:24	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, FriscoTX Rush Pb

TestAmerica Job ID: 600-113019-4

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223-15-16	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

13  
14

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

$$p_{\text{eff}} = \frac{1}{2} \rho \left( \frac{v}{2} \right)^2 = \frac{1}{4} \rho v^2$$

## 113019 Chain of Custody

Client Information						Sampler Jing Saq x1		Lab PM Upton, Cathy L	
Company Golden Associates Inc.						Phone: (932) 416-3888		E-Mail: cathy.upton@astelamericainc.com	
Address: 820 South Main Street Suite 100									
City: St. Charles						TAT Requested (days): 10 Days			
State, Zip MO, 63301									
Phone 636-724-9191						PO #: Purchase Order Requested			
Email: ataeth@golder.com						WO #:			
Project Name: Exide Recycling Center, Frisco TX						Project #: 60006523			
Site: Exide Recycling Center, Frisco TX						SSOW#:			
Sample Identification						Sample Date		Sample Time	
2015 - CuFT - 16A 0-0.5						6/8/15		0925	
2015 - CuFT - 16A 0.5-2						6/8/15		0925	
2015 - CuFT - 16A 2-4						6/8/15		0925	
2015 - CuFT - 16A 4-6						6/8/15		0925	
2015 - CuFT - 15A 0-0.5						6/8/15		0925	
2015 - CuFT - 15A 0.5-2						6/8/15		0925	
2015 - CuFT - 15A 2-4						6/8/15		0925	
2015 - CuFT - 15A 4-6						6/8/15		0925	
2015 - CuFT - 16C 2-4						6/8/15		1355	
2015 - CuFT - 16C 4-6						6/8/15		-	
DP-02									
Possible Hazard Identification									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by:						Date:		Time:	
Relinquished by:						Date/Time:		Company:	
Relinquished by:						Date/Time:		Company:	
Relinquished by:						Date/Time:		Company:	
Custody Seals Intact:						Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
A Yes A No									

Analysis Requested									
Field Filtered Sample (Yes or No)									
Perform MS/MSD (Yes or No)									
8260B - Target Compound List									
Moisture - Local Method									
6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb									
8260B - (MOD) Target Compound List									
6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb									
6010B - Pb only									
Total Number of containers									
Special Instructions/Note:									
Preservation Codes:									
A - HCL M - Hexane									
B - NaOH N - None									
C - Zn Acetate O - AsNaO2									
D - Nitric Acid P - Na2CO3									
E - NaHSO4 Q - Na2SO3									
F - MeOH R - Na2S2O3									
G - Ammonia S - H2SO4									
H - Ascorbic Acid T - TSP Dodecahydrate									
I - Ice U - Acetone									
J - DI Water V - MCAA									
K - EDTA W - pH 4-5									
L - EDA Z - other (Specify)									
Other:									

6314 Redway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

TestAmerica

<b>Client Information</b>		Sample	Lab PM		Carrier Tracking No(s)	
Client Contact: Anne Fraeth-Boyd		Jim G S-16 X1	Upton, Cathy L		600-366/8-12035, 1	
Company: Goldier Associates Inc.		Phone: (832) 416 3868	E-Mail: cathy.upton@testamericainc.com		Page 2 of 3	
Address: 820 South Main Street Suite 100		Due Date Requested:	TAT Requested (days): 10 Days			
City: St. Charles		PO #: Purchase Order Requested				
State, Zip: MO, 63301		WO #:				
Phone: 636-724-9191		Email: afaeth@golder.com				
Project Name: Exide Recycling Center, Frisco TX		Project #: 60006623				
Site: Exide Recycling Center, Frisco TX		SSOW#:				
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, A=air, L=leachate, P=paste, M=metal)	Field Filtered Sample (Yes or No)
SRB-VS-7A	0-0-5	6/8/15	1045	G	Solid	N
SRB-VS-7A	0-5-2	6/8/15	1045	G	Solid	N
SRB-VS-7A	2-4	6/8/15	1045	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1230	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1230	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1230	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1500	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1500	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1500	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
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SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-0-5	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-5-2	6/8/15	1255	G	Solid	N
SRB-VS-3A	2-4	6/8/15	1255	G	Solid	N
SRB-VS-3A	0-					

# TestAmerica Houston

6510 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

**TestAmerica**  
11000 Katy Freeway, Suite 100  
Houston, TX 77024  
Phone: (713) 690-4444 Fax: (713) 690-5646

<b>Client Information</b>		Sampler:	Jing Song X1		Lab PM:	Upton, Cathy L		COC No:		600-38678-12035.1	
Client Contact:		Phone:	(532) 466 3888		E-Mail:	cathy.upton@testamerica.com		Page:		3 of 3	
Company:		Goldier Associates Inc.		Due Date Requested:		10 Days		Analysis Requested:		<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;">             1 Accord with MS#           </div>	
Address:		820 South Main Street Suite 100		TAT Requested (days):				8260B - Target Compound List		Moisture - Local Method	
City:		St. Charles		PO #		Purchase Order Requested		6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb		8260B - (MOD) Target Compound List	
State, Zip:		MO, 63301		Project #		80006523		6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb		6010B Ph	
Phone:		638-724-9191		SSOW#:				6010B As		6010B Se	
Email:		ataeth@golder.com		Field Filtered Sample (Yes or No)				6010B Sb		Total Number of containers	
Project Name:		Exide Recycling Center Frisco TX		Perform MS/MSD (Yes or No)				6010B Ph		Special Instructions/Note:	
Exide Recycling Center Frisco TX		SSOW#:						6010B As			
Exide Recycling Center Frisco TX								6010B Se			
								6010B Sb			

Sample Identification	Sample Date	Sample Time	Sample Type (G=grab)	Matrix (W=water, S=solid, O=oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	Moisture - Local Method	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	8260B - (MOD) Target Compound List	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	6010B Ph	6010B As	6010B Se	6010B Sb	Total Number of containers	Special Instructions/Note:
B3A-A	0-5-2	6/8/15	125	G	Solid	N	X					X	X				hold
B3A-A	2-4	6/8/15	125	G	Solid	N	X					X	X				hold
B3A-B	0-0-5	6/8/15	1300	G	Solid	N	X					X	X				MS/MSD included
B3A-B	0-5-2	6/8/15	1300	G	Solid	N	X					X	X				hold
B3A-B	2-4	6/8/15	1300	G	Solid	N	X					X	X				hold
B3A-C	0-0-5	6/8/15	1510	G	Solid	N	X					X	X				hold
B3A-C	0-5-2	6/8/15	1510	G	Solid	N	X					X	X				hold
B3A-C	2-4	6/8/15	1510	G	Solid	N	X					X	X				hold
B3A-C	0-0-5	6/8/15	1445	G	Solid	N	X					X	X				Pb only
B3A-C	0-5-2	6/8/15	1445	G	Solid	N	X					X	X				Pb only
B3A-C	2-4	6/8/15	1445	G	Water	N	X					X	X				Pb only

Possible Hazard Identification		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>	
Deliverable Requested: I, II, III, IV, Other (Specify):		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: Jing Song X1		Date/Time: 6/8/15 1645	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No:	

COMMENTS:	0-0.5	0.5-1	1-1.5	1.5-2	2-2.5	2.5-3	3-3.5	3.5-4	4-4.5	4.5-5	5-5.5	5.5-6	6-6.5	6.5-7	7-7.5	7.5-8	8-8.5	8.5-9	9-9.5	9.5-10	10-10.5	10.5-11	11-11.5	11.5-12	12-12.5	12.5-13	13-13.5	13.5-14	14-14.5	14.5-15	15-15.5	15.5-16	16-16.5	16.5-17	17-17.5	17.5-18	18-18.5	18.5-19	19-19.5	19.5-20	20-20.5	20.5-21	21-21.5	21.5-22	22-22.5	22.5-23	23-23.5	23.5-24	24-24.5	24.5-25	25-25.5	25.5-26	26-26.5	26.5-27	27-27.5	27.5-28	28-28.5	28.5-29	29-29.5	29.5-30	30-30.5	30.5-31	31-31.5	31.5-32	32-32.5	32.5-33	33-33.5	33.5-34	34-34.5	34.5-35	35-35.5	35.5-36	36-36.5	36.5-37	37-37.5	37.5-38	38-38.5	38.5-39	39-39.5	39.5-40	40-40.5	40.5-41	41-41.5	41.5-42	42-42.5	42.5-43	43-43.5	43.5-44	44-44.5	44.5-45	45-45.5	45.5-46	46-46.5	46.5-47	47-47.5	47.5-48	48-48.5	48.5-49	49-49.5	49.5-50	50-50.5	50.5-51	51-51.5	51.5-52	52-52.5	52.5-53	53-53.5	53.5-54	54-54.5	54.5-55	55-55.5	55.5-56	56-56.5	56.5-57	57-57.5	57.5-58	58-58.5	58.5-59	59-59.5	59.5-60	60-60.5	60.5-61	61-61.5	61.5-62	62-62.5	62.5-63	63-63.5	63.5-64	64-64.5	64.5-65	65-65.5	65.5-66	66-66.5	66.5-67	67-67.5	67.5-68	68-68.5	68.5-69	69-69.5	69.5-70	70-70.5	70.5-71	71-71.5	71.5-72	72-72.5	72.5-73	73-73.5	73.5-74	74-74.5	74.5-75	75-75.5	75.5-76	76-76.5	76.5-77	77-77.5	77.5-78	78-78.5	78.5-79	79-79.5	79.5-80	80-80.5	80.5-81	81-81.5	81.5-82	82-82.5	82.5-83	83-83.5	83.5-84	84-84.5	84.5-85	85-85.5	85.5-86	86-86.5	86.5-87	87-87.5	87.5-88	88-88.5	88.5-89	89-89.5	89.5-90	90-90.5	90.5-91	91-91.5	91.5-92	92-92.5	92.5-93	93-93.5	93.5-94	94-94.5	94.5-95	95-95.5	95.5-96	96-96.5	96.5-97	97-97.5	97.5-98	98-98.5	98.5-99	99-99.5	99.5-100	100-100.5	100.5-101	101-101.5	101.5-102	102-102.5	102.5-103	103-103.5	103.5-104	104-104.5	104.5-105	105-105.5	105.5-106	106-106.5	106.5-107	107-107.5	107.5-108	108-108.5	108.5-109	109-109.5	109.5-110	110-110.5	110.5-111	111-111.5	111.5-112	112-112.5	112.5-113	113-113.5	113.5-114	114-114.5	114.5-115	115-115.5	115.5-116	116-116.5	116.5-117	117-117.5	117.5-118	118-118.5	118.5-119	119-119.5	119.5-120	120-120.5	120.5-121	121-121.5	121.5-122	122-122.5	122.5-123	123-123.5	123.5-124	124-124.5	124.5-125	125-125.5	125.5-126	126-126.5	126.5-127	127-127.5	127.5-128	128-128.5	128.5-129	129-129.5	129.5-130	130-130.5	130.5-131	131-131.5	131.5-132	132-132.5	132.5-133	133-133.5	133.5-134	134-134.5	134.5-135	135-135.5	135.5-136	136-136.5	136.5-137	137-137.5	137.5-138	138-138.5	138.5-139	139-139.5	139.5-140	140-140.5	140.5-141	141-141.5	141.5-142	142-142.5	142.5-143	143-143.5	143.5-144	144-144.5	144.5-145	145-145.5	145.5-146	146-146.5	146.5-147	147-147.5	147.5-148	148-148.5	148.5-149	149-149.5	149.5-150	150-150.5
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**Upton, Cathy**

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**From:** Faeth-Boyd, Anne [Anne\_Faeth-Boyd@golder.com]

**Sent:** Thursday, August 27, 2015 12:19 AM

**To:** Upton, Cathy

**Subject:** hold sample

**Follow Up Flag:** Follow up

**Flag Status:** Red

Cathy,

Can we get a rush analysis of the following hold samples:

2015-CUFT-16C (4-6), TestAmerica Job ID: 600-113019-1, ONLY Pb should be reported.

Can we get one or two day?

Thanks,  
Anne

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# Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113019-4

**Login Number: 113019**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.2
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.	False	Received extra samples not listed on COC.
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.	True	
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	Check done at department level as required.

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113063-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/24/2015 11:47:27 AM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113063-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Donnie Combs, for Cathy Upton

Name (printed)



Signature

6/23/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?			X		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?			X		
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				R10A
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

- Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
- NA = Not applicable;
- NR = Not reviewed;
- ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/23/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-113192-A-10-C MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: 600-113192-A-10-D MSD ^5 failed the recovery criteria for the following analyte(s):Lead. Matrix interference is suspected.
R07D	Method 6010B: 600-113192-A-10-D MSD ^5 failed the RPD criteria for the following analyte(s): Lead.
R08C	Method 6010B: 600-113192-A-10-B DU ^5 failed the RPD criteria for the following analyte(s): Lead.
R10A	Method 6010B: Since the chain of custody only requested As, Pb and Sb, these are the only analytes reported in the method blank and DUPs.
R10B	Method 6010B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: 600-113063-1 and 600-113063-7. Elevated reporting limits (RLs) are provided.
S09A	Method 6010B: The serial dilution performed for the following sample(s) associated with batch 165242 was outside control limits for Lead (27%): 600-113192-10 SD. See attached.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B & SW-846 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.330	0.4
Al	Thermo6500	0.300	0.500	0.510	25
As	Thermo6500	0.218	0.500	0.435	1
B	Thermo6500	0.386	0.600	0.585	20
Ba	Thermo6500	0.030	0.030	0.500	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	Thermo6500	0.864	2.500	3.305	100
Cd	Thermo6500	0.026	0.050	0.055	0.25
Co	Thermo6500	0.068	0.100	0.095	0.5
Cr	Thermo6500	0.051	0.100	0.145	0.5
Cu	Thermo6500	0.174	0.500	0.430	0.5
Fe	Thermo6500	2.534	4.000	5.370	20
K	Thermo6500	10.999	12.000	15.950	100
Li	Thermo6500	0.008	0.010	0.120	10
Mg	Thermo6500	1.921	3.000	4.500	100
Mn	Thermo6500	0.038	0.050	0.070	1.5
Mo	Thermo6500	0.136	0.350	0.400	0.5
Na	Thermo6500	0.886	2.400	7.500	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.245	0.5
Sb	Thermo6500	0.232	0.450	0.905	2.5
Se	Thermo6500	0.259	0.500	0.560	2
Si	Thermo6500	0.117	0.270	0.355	10
Sn	Thermo6500	0.087	0.150	0.075	1
Sr	Thermo6500	0.003	0.005	1.020	0.25
Ti	Thermo6500	0.015	0.030	0.050	0.5
Tl	Thermo6500	0.277	0.700	0.660	1.5
V	Thermo6500	0.079	0.150	0.125	0.5
Zn	Thermo6500	0.108	0.200	0.315	1.5

DCS = Detection Check Standard  
 MQL = Method Quantitation Limit

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

**Job ID: 600-113063-1**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-113063-1**

### Comments

No additional comments.

### Receipt

The samples were received on 6/10/2015 10:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113063-1	2015-SDA-3C 0-0.5	Solid	06/09/15 09:45	06/10/15 10:31
600-113063-4	ECO-8C 0-0.5	Solid	06/09/15 09:55	06/10/15 10:31
600-113063-7	ECO-8D 0-0.5	Solid	06/09/15 10:55	06/10/15 10:31



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

**Client Sample ID: 2015-SDA-3C 0-0.5**

Date Collected: 06/09/15 09:45

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			06/11/15 18:02	1
Percent Solids	77		1.0	1.0	%			06/11/15 18:02	1

**Client Sample ID: 2015-SDA-3C 0-0.5**

Date Collected: 06/09/15 09:45

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-1**

Matrix: Solid

Percent Solids: 77.1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.21	J	2.95	0.274	mg/Kg	☼	06/19/15 15:55	06/22/15 15:41	1
Arsenic	10.3		1.18	0.257	mg/Kg	☼	06/19/15 15:55	06/22/15 15:41	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	205		2.95	0.619	mg/Kg	☼	06/19/15 15:55	06/22/15 16:59	5

**Client Sample ID: ECO-8C 0-0.5**

Date Collected: 06/09/15 09:55

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-4**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/11/15 18:02	1
Percent Solids	79		1.0	1.0	%			06/11/15 18:02	1

**Client Sample ID: ECO-8C 0-0.5**

Date Collected: 06/09/15 09:55

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-4**

Matrix: Solid

Percent Solids: 79.3

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.37	J	3.15	0.292	mg/Kg	☼	06/19/15 15:55	06/22/15 15:43	1
Arsenic	11.0		1.26	0.275	mg/Kg	☼	06/19/15 15:55	06/22/15 15:43	1
Lead	182		0.630	0.132	mg/Kg	☼	06/19/15 15:55	06/22/15 15:43	1

**Client Sample ID: ECO-8D 0-0.5**

Date Collected: 06/09/15 10:55

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-7**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			06/11/15 18:02	1
Percent Solids	77		1.0	1.0	%			06/11/15 18:02	1

**Client Sample ID: ECO-8D 0-0.5**

Date Collected: 06/09/15 10:55

Date Received: 06/10/15 10:31

**Lab Sample ID: 600-113063-7**

Matrix: Solid

Percent Solids: 76.5

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.432	J	3.14	0.291	mg/Kg	☼	06/19/15 15:55	06/22/15 15:46	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

**Client Sample ID: ECO-8D 0-0.5**

**Lab Sample ID: 600-113063-7**

**Date Collected: 06/09/15 10:55**

**Matrix: Solid**

**Date Received: 06/10/15 10:31**

**Percent Solids: 76.5**

**Method: 6010B - Metals (ICP) (Continued)**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12.9		1.26	0.274	mg/Kg	☼	06/19/15 15:55	06/22/15 15:46	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	27.0		3.14	0.660	mg/Kg	☼	06/19/15 15:55	06/22/15 17:01	5

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the control limits
U	Analyte was not detected at or above the SDL.

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-165116/1-A  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/19/15 15:55	06/22/15 15:33	1

Lab Sample ID: LCSSRM 600-165116/2-A  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	108	106.7		mg/Kg		98.8	0.9 - 214.8
Arsenic	151	144.5		mg/Kg		95.7	80.8 - 119.9
Cadmium	152	141.4		mg/Kg		93.0	81.6 - 117.8
Lead	254	232.8		mg/Kg		91.7	81.5 - 120.9
Selenium	162	152.9		mg/Kg		94.4	77.2 - 122.2

Lab Sample ID: 600-113192-A-10-C MS  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.480	J	59.1	30.82	N1	mg/Kg	☼	51	75 - 125
Arsenic	9.74		59.1	62.20		mg/Kg	☼	89	75 - 125
Selenium	0.300	U	59.1	48.01		mg/Kg	☼	81	75 - 125

Lab Sample ID: 600-113192-A-10-D MSD  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	0.480	J	56.9	28.57	N1	mg/Kg	☼	49	75 - 125	8	20
Arsenic	9.74		56.9	59.60		mg/Kg	☼	88	75 - 125	4	20
Selenium	0.300	U	56.9	45.35		mg/Kg	☼	80	75 - 125	6	20

Lab Sample ID: 600-113192-A-10-B DU  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.480	J	0.4717	J	mg/Kg	☼	2	20
Arsenic	9.74		9.689		mg/Kg	☼	0.5	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

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

Lab Sample ID: 600-113192-A-10-B DU ^5  
Matrix: Solid  
Analysis Batch: 165206

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	40.8		28.91	F	mg/Kg	☼	34	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-113192-A-10-C MS ^5  
Matrix: Solid  
Analysis Batch: 165206

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 165116  
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cadmium - DL	0.348	J	29.5	31.34		mg/Kg	☼	105	75 - 125
Lead - DL	40.8		59.1	110.0		mg/Kg	☼	117	75 - 125

Lab Sample ID: 600-113192-A-10-D MSD ^5  
Matrix: Solid  
Analysis Batch: 165206

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 165116  
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Cadmium - DL	0.348	J	28.5	29.97		mg/Kg	☼	104	75 - 125	4	20
Lead - DL	40.8		56.9	73.52	N1 N2	mg/Kg	☼	57	75 - 125	40	20

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 600-113192-A-10-A SD ^5

SDG No: \_\_\_\_\_

Lab Name: TestAmerica Houston

Job No: 600-113063-1

Matrix: Solid

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	Method
Antimony	0.480	J	1.35	U	NC		6010B
Arsenic	9.74		11.73		NC		6010B
Cadmium	1.18		0.4995	J	NC		6010B
Lead	33.2		42.07		27	*	6010B
Selenium	0.300	U	1.50	U	NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

## Metals

### Prep Batch: 165116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-1	2015-SDA-3C 0-0.5	Total/NA	Solid	3050B	
600-113063-1 - DL	2015-SDA-3C 0-0.5	Total/NA	Solid	3050B	
600-113063-4	ECO-8C 0-0.5	Total/NA	Solid	3050B	
600-113063-7	ECO-8D 0-0.5	Total/NA	Solid	3050B	
600-113063-7 - DL	ECO-8D 0-0.5	Total/NA	Solid	3050B	
600-113192-A-10-B DU	Duplicate	Total/NA	Solid	3050B	
600-113192-A-10-B DU ^5	Duplicate	Total/NA	Solid	3050B	
600-113192-A-10-C MS	Matrix Spike	Total/NA	Solid	3050B	
600-113192-A-10-C MS ^5 -	Matrix Spike	Total/NA	Solid	3050B	
600-113192-A-10-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	
600-113192-A-10-D MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	3050B	
LCSSRM 600-165116/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165116/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 165206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-1 - DL	2015-SDA-3C 0-0.5	Total/NA	Solid	6010B	165116
600-113063-7 - DL	ECO-8D 0-0.5	Total/NA	Solid	6010B	165116
600-113192-A-10-B DU ^5	Duplicate	Total/NA	Solid	6010B	165116
600-113192-A-10-C MS ^5 -	Matrix Spike	Total/NA	Solid	6010B	165116
600-113192-A-10-D MSD ^5	Matrix Spike Duplicate	Total/NA	Solid	6010B	165116

### Analysis Batch: 165242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-1	2015-SDA-3C 0-0.5	Total/NA	Solid	6010B	165116
600-113063-4	ECO-8C 0-0.5	Total/NA	Solid	6010B	165116
600-113063-7	ECO-8D 0-0.5	Total/NA	Solid	6010B	165116
600-113192-A-10-B DU	Duplicate	Total/NA	Solid	6010B	165116
600-113192-A-10-C MS	Matrix Spike	Total/NA	Solid	6010B	165116
600-113192-A-10-D MSD	Matrix Spike Duplicate	Total/NA	Solid	6010B	165116
LCSSRM 600-165116/2-A	Lab Control Sample	Total/NA	Solid	6010B	165116
MB 600-165116/1-A	Method Blank	Total/NA	Solid	6010B	165116

## General Chemistry

### Analysis Batch: 164478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-1	2015-SDA-3C 0-0.5	Total/NA	Solid	Moisture	
600-113063-4	ECO-8C 0-0.5	Total/NA	Solid	Moisture	
600-113063-7	ECO-8D 0-0.5	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

**Client Sample ID: 2015-SDA-3C 0-0.5**

**Date Collected: 06/09/15 09:45**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-1**

**Matrix: Solid**

**Percent Solids: 77.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.10 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.10 g	50 mL	165242	06/22/15 15:41	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.10 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.10 g	50 mL	165206	06/22/15 16:59	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164478	06/11/15 18:02	MJB	TAL HOU

**Client Sample ID: ECO-8C 0-0.5**

**Date Collected: 06/09/15 09:55**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-4**

**Matrix: Solid**

**Percent Solids: 79.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	165242	06/22/15 15:43	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164478	06/11/15 18:02	MJB	TAL HOU

**Client Sample ID: ECO-8D 0-0.5**

**Date Collected: 06/09/15 10:55**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-7**

**Matrix: Solid**

**Percent Solids: 76.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	165242	06/22/15 15:46	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	165206	06/22/15 17:01	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164478	06/11/15 18:02	MJB	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

## Chain of Custody Record

TestAmerica

713 690 4444 Fax 713 690 5846



<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street Suite 100 City: St. Charles State: MO, Zip: 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site: Exide Recycling Center, Frisco TX		Sampler: Jing Song XI Lab PM: Upton, Cathy L Phone: (832) 416 3888 E-Mail: cathy.upton@testamerica.com
Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #: Project #: 60006523 SOW#:		COC No: 600-36676-12035.1 Page: 1 of 2 Job #:

Analysis Requested				Preservation Codes:		Special Instructions/Note:
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, A=air)	Preservation Code	
2015-SDA-3C 0-0.5'	6/9/15	0745	G	Solid	N	
2015-SDA-3C 0.5'-2'	↓	↓	G	Solid	N	
2015-SDA-3C 2-4'	↓	↓	G	Solid	N	
ECO-8C 0-0.5'	6/9/15	0955	G	Solid	N	
ECO-8C 0.5'-2'	↓	↓	G	Solid	N	
ECO-8C 2-4'	↓	↓	G	Solid	N	
ECO-8D 0-0.5'	6/9/15	1005	G	Solid	N	
ECO-8D 0.5'-2'	↓	↓	G	Solid	N	
ECO-8D 2-4'	↓	↓	G	Solid	N	
2015-STB-6A 1-2'	6/9/15	1405	G	Solid	N	
2015-STB-6A 4'-6'	6/9/15	1405	G	Water	N	

Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by: Jing Song XI		Date: 6/9/15	
Relinquished by: Jing Song XI		Date/Time: 6/9/15 1700	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.	

[illegible]

TestAmerica Houston

Loc: 600

113063

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sam

Checklist

Date/Time Received:

JOB NUMBER:

CLIENT:

UNPACKED BY:

CARRIER/DRIVER:

Custody Seal Present:

☒ YES☐ NO

Number of Coolers Received:

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
621	Y / N	Y / N	19	682	0.0	19
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice?

☒ YES☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YESBase samples are > pH 12: ☐ YES ☒ NO

Acid preserved are &lt; pH 2:

☐ YES☐ NO

pH paper Lot #

VOA headspace acceptable (5-6mm):

☐ YES☐ NO☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113063-1

**Login Number: 113063**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	1.9
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113063-3

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/17/2015 5:05:03 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113063-3 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☒ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☐ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jeanette Castillo, for Cathy Upton

Name (printed)



Signature

6/17/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/17/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			R04B
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/17/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?			X		
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

## Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/17/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113063-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

ER # <sup>1</sup>	Description
R04B	Method 8260B: Surrogate recovery for the following sample(s) was outside control limits: 600-113063-10 and 600-113063-13. Re-analysis was performed with concurring results. The second set of data has been reported.
R07D	Method 8260B: 600-113063-16 MSD failed the RPD criteria for the following analyte(s): Benzene.
<ol style="list-style-type: none"><li>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li><li>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li><li>3. NA = Not applicable;</li><li>4. NR = Not reviewed;</li><li>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li></ol>	

**Matrix:** Solid  
**Method:** 8260B  
**Prep Method:** 5030B  
**Date Analyzed:** 1/12/2015  
**Job #:** 600-104877  
**TALS Batch:** 153484  
**Units:** ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
1,1,1,2-Tetrachloroethane	CHVOAMS09	1.400	2.500	3.892	5
1,1,1-Trichloroethane	CHVOAMS09	0.740	2.500	4.380	5
1,1,2,2-Tetrachloroethane	CHVOAMS09	0.870	2.500	4.354	5
1,1,2-Trichloro-1,2,2-trifluoroethane	CHVOAMS09	1.440	2.500	4.529	5
1,1,2-Trichloroethane	CHVOAMS09	0.730	2.500	3.869	40
1,1-Dichloroethane	CHVOAMS09	0.870	2.500	3.204	5
1,1-Dichloroethene	CHVOAMS09	1.220	2.500	4.430	5
1,1-Dichloropropene	CHVOAMS09	0.650	2.500	3.041	5
1,2,3-Trichlorobenzene	CHVOAMS09	0.620	2.500	5.036	5
1,2,3-Trichloropropane	CHVOAMS09	1.310	2.500	4.311	5
1,2,3-Trimethylbenzene	CHVOAMS09	1.820	2.500	4.549	5
1,2,4-Trichlorobenzene	CHVOAMS09	1.970	2.500	4.927	5
1,2,4-Trimethylbenzene	CHVOAMS09	0.920	2.500	4.578	5
1,2-Dibromo-3-Chloropropane	CHVOAMS09	2.440	2.500	5.898	5
1,2-Dichlorobenzene	CHVOAMS09	0.800	2.500	4.818	5
1,2-Dichloroethane	CHVOAMS09	0.900	2.500	2.737	5
1,2-Dichloroethene, Total	CHVOAMS09	1.900	5.000	6.200	10
1,2-Dichloropropane	CHVOAMS09	0.710	2.500	2.862	5
1,3,5-Trichlorobenzene	CHVOAMS09	10.000	5.000	8.026	5
1,3,5-Trimethylbenzene	CHVOAMS09	1.600	2.500	0.410	5
1,3-Dichlorobenzene	CHVOAMS09	0.710	2.500	4.741	5
1,3-Dichloropropane	CHVOAMS09	0.630	2.500	3.657	5
1,4-Dichlorobenzene	CHVOAMS09	0.660	2.500	4.984	5
1,4-Dioxane	CHVOAMS09	62.070	100.000	80.080	500
2,2-Dichloropropane	CHVOAMS09	1.820	2.500	2.622	5
2-Butanone (MEK)	CHVOAMS09	1.900	5.000	8.856	10
2-Chloro-1,3-butadiene	CHVOAMS09	2.710	5.000	6.351	5
2-Chloroethyl vinyl ether	CHVOAMS09	0.98	5	7.001	10
2-Chlorotoluene	CHVOAMS09	0.680	2.500	0.217	5
2-Hexanone	CHVOAMS09	1.010	5.000	7.107	10
2-Methyl-2-propanol	CHVOAMS09	10.000	50.000	7.994	50
2-Nitropropane	CHVOAMS09	24.290	5.000	8.933	5
3-Chloro-1-propene	CHVOAMS09	1.390	2.500	4.295	5
4-Chlorotoluene	CHVOAMS09	0.830	2.500	4.401	5
4-Isopropyltoluene	CHVOAMS09	1.020	2.500	5.730	5
4-Methyl-2-pentanone (MIBK)	CHVOAMS09	1.470	5.000	5.441	10
Acetone	CHVOAMS09	1.660	25.000	24.903	10
Acetonitrile	CHVOAMS09	1.390	100.000	197.413	10
Acrolein	CHVOAMS09	6.230	12.500	15.141	25
Acrylonitrile	CHVOAMS09	5.820	25.000	26.663	25
Benzene	CHVOAMS09	0.630	2.500	3.098	5
Benzyl chloride	CHVOAMS09	2.140	2.500	5.425	5
Bromobenzene	CHVOAMS09	0.990	2.500	4.446	5
Bromoform	CHVOAMS09	1.370	2.500	4.162	5
Bromomethane	CHVOAMS09	0.830	2.500	2.976	10
Butadiene	CHVOAMS09	1.250	2.500	3.978	5
Carbon disulfide	CHVOAMS09	0.550	2.500	4.434	10

DCS = Detection Check Standard  
MQL = Method Quantitation Limit



**Matrix:** Solid  
**Method:** 8260B  
**Prep Method:** 5030B  
**Date Analyzed:** 1/12/2015  
**Job #:** 600-104877  
**TALS Batch:** 153484  
**Units:** ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Carbon tetrachloride	CHVOAMS09	1.130	2.500	4.441	5
Chlorobenzene	CHVOAMS09	0.960	2.500	3.969	5
Chlorobromomethane	CHVOAMS09	1.780	2.500	2.961	5
Chlorodibromomethane	CHVOAMS09	0.940	2.500	3.650	5
Chloroethane	CHVOAMS09	1.400	2.500	2.414	10
Chloroform	CHVOAMS09	0.660	2.500	3.114	5
Chloromethane	CHVOAMS09	1.660	2.500	1.975	10
cis-1,2-Dichloroethene	CHVOAMS09	0.830	2.500	3.016	5
cis-1,3-Dichloropropene	CHVOAMS09	0.540	2.500	3.556	5
Cyclohexane	CHVOAMS09	1.920	5.000	1.421	5
Cyclohexanone	CHVOAMS09	134.780	250.000	281.188	250
Dibromomethane	CHVOAMS09	0.750	2.500	2.830	5
Dichlorobromomethane	CHVOAMS09	0.660	2.500	2.853	5
Dichlorodifluoromethane	CHVOAMS09	1.540	2.500	2.238	5
Dichlorofluoromethane	CHVOAMS09	1.000	2.500	2.304	5
Ethyl acetate	CHVOAMS09	2.810	5.000	8.802	5
Ethyl acrylate	CHVOAMS09	10.660	5.000	5.439	10
Ethyl ether	CHVOAMS09	1.950	2.500	2.806	5
Ethyl methacrylate	CHVOAMS09	1.660	2.500	3.654	5
Ethylbenzene	CHVOAMS09	1.020	2.500	3.914	5
Ethylene Dibromide	CHVOAMS09	1.020	2.500	3.749	5
Hexachlorobutadiene	CHVOAMS09	1.130	2.500	4.934	5
Hexane	CHVOAMS09	1.230	2.500	4.596	5
Iodomethane	CHVOAMS09	2.500	2.500	4.285	5
Isobutyl alcohol	CHVOAMS09	17.160	62.500	130.592	50
Isooctane	CHVOAMS09	10.000	2.500	3.142	5
Isopropyl ether	CHVOAMS09	1.760	2.500	2.854	5
Methyl methacrylate	CHVOAMS09	2.860	5.000	4.752	10
Methyl tert-butyl ether	CHVOAMS09	1.830	2.500	2.992	5
Methylcyclohexane	CHVOAMS09	1.460	2.500	4.578	5
Methylene Chloride	CHVOAMS09	2.190	2.500	3.707	10
m-Xylene & p-Xylene	CHVOAMS09	1.520	2.500	3.999	5
Naphthalene	CHVOAMS09	2.370	2.500	5.431	10
n-Butyl acetate	CHVOAMS09	2.370	2.500	3.603	5
N-Propylbenzene	CHVOAMS09	0.950	2.500	0.470	5
o-Xylene	CHVOAMS09	1.130	2.500	3.937	5
Pentachloroethane	CHVOAMS09	5.000	5.000	7.550	5
sec-Butylbenzene	CHVOAMS09	0.700	2.500	5.670	5
Styrene	CHVOAMS09	0.710	2.500	5.107	5
tert-Butylbenzene	CHVOAMS09	0.950	2.500	5.617	5
Tetrachloroethene	CHVOAMS09	0.710	2.500	5.418	5
Tetrahydrofuran	CHVOAMS09	5.390	10.000	9.543	5
Toluene	CHVOAMS09	1.380	2.500	3.904	5
trans-1,2-Dichloroethene	CHVOAMS09	1.140	2.500	3.199	5
trans-1,3-Dichloropropene	CHVOAMS09	0.580	2.500	3.617	5
trans-1,4-Dichloro-2-butene	CHVOAMS09	1.900	2.500	3.419	5
Trichloroethene	CHVOAMS09	1.400	2.500	3.140	5

DCS = Detection Check Standard  
MQL = Method Quantitation Limit

**Matrix:** Solid  
**Method:** 8260B  
**Prep Method:** 5030B  
**Date Analyzed:** 1/12/2015  
**Job #:** 600-104877  
**TALS Batch:** 153484  
**Units:** ug/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Trichlorofluoromethane	CHVOAMS09	0.660	2.500	2.219	10
Vinyl chloride	CHVOAMS09	0.900	2.500	2.121	10
Xylenes, Total	CHVOAMS09	1.130	5.000	7.900	5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

**Job ID: 600-113063-3**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-113063-3**

### Comments

No additional comments.

### Receipt

The samples were received on 6/10/2015 10:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.9° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU

### Protocol References:

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113063-10	2015-STB-6A 1-2	Solid	06/09/15 14:05	06/10/15 10:31
600-113063-11	2015-STB-6A 4-6	Solid	06/09/15 14:05	06/10/15 10:31
600-113063-12	2015-STB-6A 6-8	Solid	06/09/15 14:05	06/10/15 10:31
600-113063-13	2015-STB-6B 1-2	Solid	06/09/15 14:50	06/10/15 10:31
600-113063-16	2015-STB-6C 0.75-2	Solid	06/09/15 14:35	06/10/15 10:31
600-113063-19	DUP-03	Solid	06/09/15 00:00	06/10/15 10:31

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

**Client Sample ID: 2015-STB-6A 1-2**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-10**

**Matrix: Solid**

**Percent Solids: 88.0**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00124	J	0.00571	0.000720	mg/Kg	☼	06/15/15 12:00	06/15/15 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	108		57 - 140				06/15/15 12:00	06/15/15 16:21	1
Dibromofluoromethane	58	X	68 - 140				06/15/15 12:00	06/15/15 16:21	1
1,2-Dichloroethane-d4 (Surr)	89		61 - 130				06/15/15 12:00	06/15/15 16:21	1
Toluene-d8 (Surr)	86		50 - 130				06/15/15 12:00	06/15/15 16:21	1

**Client Sample ID: 2015-STB-6A 4-6**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-11**

**Matrix: Solid**

**Percent Solids: 74.9**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000895	U	0.00710	0.000895	mg/Kg	☼	06/14/15 14:17	06/14/15 20:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	120		57 - 140				06/14/15 14:17	06/14/15 20:59	1
Dibromofluoromethane	81		68 - 140				06/14/15 14:17	06/14/15 20:59	1
1,2-Dichloroethane-d4 (Surr)	86		61 - 130				06/14/15 14:17	06/14/15 20:59	1
Toluene-d8 (Surr)	86		50 - 130				06/14/15 14:17	06/14/15 20:59	1

**Client Sample ID: 2015-STB-6A 6-8**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-12**

**Matrix: Solid**

**Percent Solids: 75.8**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00784	U	0.0622	0.00784	mg/Kg	☼	06/15/15 12:00	06/15/15 17:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	109		57 - 140				06/15/15 12:00	06/15/15 17:45	1
Dibromofluoromethane	82		68 - 140				06/15/15 12:00	06/15/15 17:45	1
1,2-Dichloroethane-d4 (Surr)	76		61 - 130				06/15/15 12:00	06/15/15 17:45	1
Toluene-d8 (Surr)	81		50 - 130				06/15/15 12:00	06/15/15 17:45	1

**Client Sample ID: 2015-STB-6B 1-2**

**Date Collected: 06/09/15 14:50**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-13**

**Matrix: Solid**

**Percent Solids: 72.8**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000868	U	0.00689	0.000868	mg/Kg	☼	06/15/15 12:00	06/15/15 16:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	119		57 - 140				06/15/15 12:00	06/15/15 16:49	1
Dibromofluoromethane	54	X	68 - 140				06/15/15 12:00	06/15/15 16:49	1
1,2-Dichloroethane-d4 (Surr)	76		61 - 130				06/15/15 12:00	06/15/15 16:49	1
Toluene-d8 (Surr)	90		50 - 130				06/15/15 12:00	06/15/15 16:49	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

**Client Sample ID: 2015-STB-6C 0.75-2**

**Lab Sample ID: 600-113063-16**

**Date Collected: 06/09/15 14:35**

**Matrix: Solid**

**Date Received: 06/10/15 10:31**

**Percent Solids: 95.1**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000688	J	0.00530	0.000668	mg/Kg	☼	06/14/15 14:17	06/14/15 16:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	112		57 - 140				06/14/15 14:17	06/14/15 16:21	1
Dibromofluoromethane	79		68 - 140				06/14/15 14:17	06/14/15 16:21	1
1,2-Dichloroethane-d4 (Surr)	87		61 - 130				06/14/15 14:17	06/14/15 16:21	1
Toluene-d8 (Surr)	80		50 - 130				06/14/15 14:17	06/14/15 16:21	1

**Client Sample ID: DUP-03**

**Lab Sample ID: 600-113063-19**

**Date Collected: 06/09/15 00:00**

**Matrix: Solid**

**Date Received: 06/10/15 10:31**

**Percent Solids: 91.8**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000692	U	0.00549	0.000692	mg/Kg	☼	06/15/15 18:00	06/15/15 21:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	115		57 - 140				06/15/15 18:00	06/15/15 21:55	1
Dibromofluoromethane	73		68 - 140				06/15/15 18:00	06/15/15 21:55	1
1,2-Dichloroethane-d4 (Surr)	100		61 - 130				06/15/15 18:00	06/15/15 21:55	1
Toluene-d8 (Surr)	102		50 - 130				06/15/15 18:00	06/15/15 21:55	1



## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
X	Surrogate is outside control limits
U	Analyte was not detected at or above the SDL.
N2	RPD of the MS and MSD exceeds the control limits

### 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
CFL	Contains Free Liquid
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)

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

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

**Matrix: Solid**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (57-140)	DBFM (68-140)	12DCE (61-130)	TOL (50-130)
600-113063-10	2015-STB-6A 1-2	108	58 X	89	86
600-113063-11	2015-STB-6A 4-6	120	81	86	86
600-113063-12	2015-STB-6A 6-8	109	82	76	81
600-113063-13	2015-STB-6B 1-2	119	54 X	76	90
600-113063-16	2015-STB-6C 0.75-2	112	79	87	80
600-113063-16 MS	2015-STB-6C 0.75-2	133	84	96	87
600-113063-16 MSD	2015-STB-6C 0.75-2	111	70	93	86
600-113063-19	DUP-03	115	73	100	102
LCS 600-164592/4	Lab Control Sample	122	88	87	81
LCS 600-164639/4	Lab Control Sample	112	83	87	87
LCSD 600-164592/5	Lab Control Sample Dup	111	81	76	78
LCSD 600-164639/5	Lab Control Sample Dup	115	91	86	88
MB 600-164592/7	Method Blank	117	73	73	80
MB 600-164639/7	Method Blank	108	88	85	85

## Surrogate Legend

BFB = 4-Bromofluorobenzene  
DBFM = Dibromofluoromethane  
12DCE = 1,2-Dichloroethane-d4 (Surr)  
TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

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

Lab Sample ID: MB 600-164592/7

Matrix: Solid

Analysis Batch: 164592

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg	-		06/14/15 13:48	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	117		57 - 140					06/14/15 13:48	1
Dibromofluoromethane	73		68 - 140					06/14/15 13:48	1
1,2-Dichloroethane-d4 (Surr)	73		61 - 130					06/14/15 13:48	1
Toluene-d8 (Surr)	80		50 - 130					06/14/15 13:48	1

Lab Sample ID: LCS 600-164592/4

Matrix: Solid

Analysis Batch: 164592

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.0500	0.05293		mg/Kg	-	106	70 - 131
Surrogate	%Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene	122		57 - 140						
Dibromofluoromethane	88		68 - 140						
1,2-Dichloroethane-d4 (Surr)	87		61 - 130						
Toluene-d8 (Surr)	81		50 - 130						

Lab Sample ID: LCSD 600-164592/5

Matrix: Solid

Analysis Batch: 164592

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			0.0500	0.04815		mg/Kg	-	96	70 - 131	9	30
Surrogate	%Recovery	LCSD Qualifier	Limits								
4-Bromofluorobenzene	111		57 - 140								
Dibromofluoromethane	81		68 - 140								
1,2-Dichloroethane-d4 (Surr)	76		61 - 130								
Toluene-d8 (Surr)	78		50 - 130								

Lab Sample ID: 600-113063-16 MS

Matrix: Solid

Analysis Batch: 164592

Client Sample ID: 2015-STB-6C 0.75-2

Prep Type: Total/NA

Prep Batch: 164595

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.000688	J	0.0518	0.03922		mg/Kg	☼	74	70 - 131
Surrogate	%Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene	133		57 - 140						
Dibromofluoromethane	84		68 - 140						
1,2-Dichloroethane-d4 (Surr)	96		61 - 130						
Toluene-d8 (Surr)	87		50 - 130						

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

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

Lab Sample ID: 600-113063-16 MSD

Matrix: Solid

Analysis Batch: 164592

Client Sample ID: 2015-STB-6C 0.75-2

Prep Type: Total/NA

Prep Batch: 164595

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.000688	J	0.0534	0.05356	N2	mg/Kg	☼	99	70 - 131	31	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene	111		57 - 140								
Dibromofluoromethane	70		68 - 140								
1,2-Dichloroethane-d4 (Surr)	93		61 - 130								
Toluene-d8 (Surr)	86		50 - 130								

Lab Sample ID: MB 600-164639/7

Matrix: Solid

Analysis Batch: 164639

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000630	U	0.00500	0.000630	mg/Kg	-		06/15/15 14:57	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene	108		57 - 140		06/15/15 14:57	1			
Dibromofluoromethane	88		68 - 140		06/15/15 14:57	1			
1,2-Dichloroethane-d4 (Surr)	85		61 - 130		06/15/15 14:57	1			
Toluene-d8 (Surr)	85		50 - 130		06/15/15 14:57	1			

Lab Sample ID: LCS 600-164639/4

Matrix: Solid

Analysis Batch: 164639

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.05888		mg/Kg	-	118	70 - 131		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
4-Bromofluorobenzene	112		57 - 140								
Dibromofluoromethane	83		68 - 140								
1,2-Dichloroethane-d4 (Surr)	87		61 - 130								
Toluene-d8 (Surr)	87		50 - 130								

Lab Sample ID: LCSD 600-164639/5

Matrix: Solid

Analysis Batch: 164639

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.0500	0.05635		mg/Kg	-	113	70 - 131	4	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene	115		57 - 140						
Dibromofluoromethane	91		68 - 140						
1,2-Dichloroethane-d4 (Surr)	86		61 - 130						
Toluene-d8 (Surr)	88		50 - 130						

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.

Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

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

Analyte	MQL	MDL	Units	Method
Benzene	0.00500	0.000630	mg/Kg	8260B

## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

### GC/MS VOA

#### Analysis Batch: 164592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-11	2015-STB-6A 4-6	Total/NA	Solid	8260B	164595
600-113063-16	2015-STB-6C 0.75-2	Total/NA	Solid	8260B	164595
600-113063-16 MS	2015-STB-6C 0.75-2	Total/NA	Solid	8260B	164595
600-113063-16 MSD	2015-STB-6C 0.75-2	Total/NA	Solid	8260B	164595
LCS 600-164592/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-164592/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 600-164592/7	Method Blank	Total/NA	Solid	8260B	

#### Prep Batch: 164595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-11	2015-STB-6A 4-6	Total/NA	Solid	5030B	
600-113063-16	2015-STB-6C 0.75-2	Total/NA	Solid	5030B	
600-113063-16 MS	2015-STB-6C 0.75-2	Total/NA	Solid	5030B	
600-113063-16 MSD	2015-STB-6C 0.75-2	Total/NA	Solid	5030B	

#### Analysis Batch: 164639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-10	2015-STB-6A 1-2	Total/NA	Solid	8260B	164651
600-113063-12	2015-STB-6A 6-8	Total/NA	Solid	8260B	164651
600-113063-13	2015-STB-6B 1-2	Total/NA	Solid	8260B	164651
600-113063-19	DUP-03	Total/NA	Solid	8260B	164651
LCS 600-164639/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 600-164639/5	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 600-164639/7	Method Blank	Total/NA	Solid	8260B	

#### Prep Batch: 164651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113063-10	2015-STB-6A 1-2	Total/NA	Solid	5030B	
600-113063-12	2015-STB-6A 6-8	Total/NA	Solid	5030B	
600-113063-13	2015-STB-6B 1-2	Total/NA	Solid	5030B	
600-113063-19	DUP-03	Total/NA	Solid	5030B	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

**Client Sample ID: 2015-STB-6A 1-2**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-10**

**Matrix: Solid**

**Percent Solids: 88.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.97 g	5 mL	164651	06/15/15 12:00	KLV	TAL HOU
Total/NA	Analysis	8260B		1	4.97 g	5 mL	164639	06/15/15 16:21	KLV	TAL HOU

**Client Sample ID: 2015-STB-6A 4-6**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-11**

**Matrix: Solid**

**Percent Solids: 74.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.70 g	5 mL	164595	06/14/15 14:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	4.70 g	5 mL	164592	06/14/15 20:59	WS1	TAL HOU

**Client Sample ID: 2015-STB-6A 6-8**

**Date Collected: 06/09/15 14:05**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-12**

**Matrix: Solid**

**Percent Solids: 75.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			0.53 g	5 mL	164651	06/15/15 12:00	KLV	TAL HOU
Total/NA	Analysis	8260B		1	0.53 g	5 mL	164639	06/15/15 17:45	KLV	TAL HOU

**Client Sample ID: 2015-STB-6B 1-2**

**Date Collected: 06/09/15 14:50**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-13**

**Matrix: Solid**

**Percent Solids: 72.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.98 g	5 mL	164651	06/15/15 12:00	KLV	TAL HOU
Total/NA	Analysis	8260B		1	4.98 g	5 mL	164639	06/15/15 16:49	KLV	TAL HOU

**Client Sample ID: 2015-STB-6C 0.75-2**

**Date Collected: 06/09/15 14:35**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-16**

**Matrix: Solid**

**Percent Solids: 95.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	164595	06/14/15 14:17	WS1	TAL HOU
Total/NA	Analysis	8260B		1	4.96 g	5 mL	164592	06/14/15 16:21	WS1	TAL HOU

**Client Sample ID: DUP-03**

**Date Collected: 06/09/15 00:00**

**Date Received: 06/10/15 10:31**

**Lab Sample ID: 600-113063-19**

**Matrix: Solid**

**Percent Solids: 91.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.96 g	5 mL	164651	06/15/15 18:00	KLV	TAL HOU
Total/NA	Analysis	8260B		1	4.96 g	5 mL	164639	06/15/15 21:55	KLV	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

**Laboratory References:**

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

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# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113063-3

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15
Analysis Method	Prep Method	Matrix	Analyte	

## Chain of Custody Record

TestAmerica

713 690 4444 Fax 713 690 5846



Client Information		Sampler: <b>Jing Song XI</b>	Lab POC: <b>Upton, Cathy L</b>
Client Contact: <b>Anne Faeth-Boyd</b>		Phone: <b>(832) 416 3888</b>	E-Mail: <b>cathy.upton@testamericam.com</b>
Company: <b>Golder Associates Inc.</b>		Job #: <b>600-36678-12035.1</b>	
Address: <b>820 South Main Street Suite 100</b>		Page: <b>1 of 2</b>	
City: <b>St. Charles</b>		Job #: <b>600-113063 Chain of Custody</b>	
State, Zip: <b>MO, 63301</b>			
Phone: <b>636-724-9191</b>			
Email: <b>afaeith@golder.com</b>			
Project Name: <b>Exide Recycling Center, Frisco TX</b>			
Site: <b>Exide Recycling Center, Frisco TX</b>			

Analysis Requested				Preservation Codes:				Special Instructions/Note:
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	826B - Target Compound List	
2015-SDA-3C 0-0.5'	6/9/15	0945	G	Solid	N	N	826B - (MOD) Target Compound List	
2015-SDA-3C 0.5'-2'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
2015-SDA-3C 2'-4'	6/9/15	0955	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8C 0-0.5'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8C 0.5'-2'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8C 2'-4'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8D 0-0.5'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8D 0.5'-2'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
ECO-8D 2'-4'	6/9/15	1005	G	Solid	N	N	826B - (MOD) Target Compound List	
2015-STB-6A 1'-2'	6/9/15	1405	G	Solid	N	N	826B - (MOD) Target Compound List	
2015-STB-6A 4'-6'	6/9/15	1405	G	Water	N	N	826B - (MOD) Target Compound List	

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab
Deliverable Requested: I, II, III, IV, Other (specify)		Archive For _____ Months	
Empty Kit Relinquished by:		Method of Shipment: _____	
Relinquished by: <b>Jing Song XI</b>	Date/Time: <b>6/9/15 1700</b>	Received by: <b>[Signature]</b>	Date/Time: <b>6/9/15 1700</b>
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Custody Seals Intact. Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	

[illegible]

TestAmerica Houston

Loc: 600

113063

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sam

Checklist

Date/Time Received:

JOB NUMBER:

CLIENT:

UNPACKED BY:

CARRIER/DRIVER:

Custody Seal Present:

☒ YES☐ NO

Number of Coolers Received:

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
001	Y / N	Y / N	19	682	0.0	19
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice?

☒ YES☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YES

Base samples are &gt; pH 12:

☐ YES☐ NO

Acid preserved are &lt; pH 2:

☐ YES☐ NO

pH paper Lot #

VOA headspace acceptable (5-6mm):

☐ YES☐ NO☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113063-3

**Login Number: 113063**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	1.9
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040  
Tel: (713)690-4444

TestAmerica Job ID: 600-113192-1

Client Project/Site: Exide Recycling Center, Frisco TX  
Revision: 2

For:

Golder Associates Inc.  
500 Century Plaza Drive  
Suite 190  
Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

7/27/2015 3:49:09 PM

Donnie Combs, Project Management Assistant I  
(713)690-4444

[donnie.combs@testamericainc.com](mailto:donnie.combs@testamericainc.com)

Designee for

Cathy Upton, Project Manager I  
(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*



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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113192-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Donnie Combs, for Cathy Upton

Name (printed)



Signature

6/25/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/25/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/25/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/25/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

ER # <sup>1</sup>	Description
R01A	The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): 600-113192-43.
R07C	<p>Method 6010B: 600-113192-10 MS failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected.</p> <p>Method 6010B: 600-113192-10 MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.</p> <p>Method 6010B: 600-113192-21 MS failed the recovery criteria for the following analyte(s): Antimony, Arsenic, Lead, Selenium. Matrix interference is suspected.</p> <p>Method 6010B: 600-113192-21 MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.</p> <p>Method 6010B: 600-113451-A-28-F MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected.</p> <p>Method 6010B: 600-113566-A-6-D MS failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected.</p>
R07D	<p>Method 6010B: 600-113192-10 MSD failed the RPD criteria for the following analyte(s): Lead.</p> <p>Method 6010B: 600-113192-21 MSD failed the RPD criteria for the following analyte(s): Lead.</p>
R08C	<p>Method 6010B: 600-113192-10 DU failed the RPD criteria for the following analyte(s): Lead.</p> <p>Method 6010B: 600-113192-21 DU failed the RPD criteria for the following analyte(s): Lead.</p> <p>Method 6010B: 600-113451-A-28-E DU failed the RPD criteria for the following analyte(s): Arsenic.</p>
R10B	Method 6010B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: 600-113192-1, 600-113192-4, 600-113192-7, 600-113192-10, 600-113192-10 DU, 600-113192-10 MS, 600-113192-10 MSD, 600-113192-12, 600-113192-13, 600-113192-15, 600-113192-18, 600-113192-21, 600-113192-21 DU, 600-113192-21 MS, 600-113192-21 MSD, 600-113192-23, 600-113192-24, 600-113192-27, 600-113192-30, 600-113192-33, 600-113192-36, 600-113192-39, and 600-113192-43. Elevated reporting limits (RLs) are provided.
S09A	Method 6010B: The serial dilution performed for the following sample(s) associated with batch 165242 was outside control limits for Lead (27%): 600-113192-10 SD. See attached.
	<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>

**Matrix:** Solid  
**Method:** SW-846 6010B & SW-846 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.330	0.4
Al	Thermo6500	0.300	0.500	0.510	25
As	Thermo6500	0.218	0.500	0.435	1
B	Thermo6500	0.386	0.600	0.585	20
Ba	Thermo6500	0.030	0.030	0.500	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	Thermo6500	0.864	2.500	3.305	100
Cd	Thermo6500	0.026	0.050	0.055	0.25
Co	Thermo6500	0.068	0.100	0.095	0.5
Cr	Thermo6500	0.051	0.100	0.145	0.5
Cu	Thermo6500	0.174	0.500	0.430	0.5
Fe	Thermo6500	2.534	4.000	5.370	20
K	Thermo6500	10.999	12.000	15.950	100
Li	Thermo6500	0.008	0.010	0.120	10
Mg	Thermo6500	1.921	3.000	4.500	100
Mn	Thermo6500	0.038	0.050	0.070	1.5
Mo	Thermo6500	0.136	0.350	0.400	0.5
Na	Thermo6500	0.886	2.400	7.500	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.245	0.5
Sb	Thermo6500	0.232	0.450	0.905	2.5
Se	Thermo6500	0.259	0.500	0.560	2
Si	Thermo6500	0.117	0.270	0.355	10
Sn	Thermo6500	0.087	0.150	0.075	1
Sr	Thermo6500	0.003	0.005	1.020	0.25
Ti	Thermo6500	0.015	0.030	0.050	0.5
Tl	Thermo6500	0.277	0.700	0.660	1.5
V	Thermo6500	0.079	0.150	0.125	0.5
Zn	Thermo6500	0.108	0.200	0.315	1.5

DCS = Detection Check Standard  
 MQL = Method Quantitation Limit

**Matrix:** Water  
**Method:** SW-846 6010B, SW-846 6010C, & EPA 200.7  
**Prep Method:** SW-846 3010A & EPA 200  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.001	0.003	0.003	0.01
Al	Thermo6500	0.022	0.050	0.084	0.5
As	Thermo6500	0.003	0.009	0.008	0.01
B	Thermo6500	0.008	0.020	0.030	0.2
Ba	Thermo6500	0.002	0.005	0.009	0.02
Be	Thermo6500	0.001	0.002	0.005	0.005
Ca	Thermo6500	0.022	0.050	0.064	1
Cd	Thermo6500	0.000	0.001	0.001	0.005
Co	Thermo6500	0.001	0.001	0.001	0.01
Cr	Thermo6500	0.002	0.002	0.006	0.01
Cu	Thermo6500	0.001	0.002	0.008	0.01
Fe	Thermo6500	0.087	0.100	0.133	0.4
K	Thermo6500	0.129	0.300	0.172	1
Li	Thermo6500	0.002	0.005	0.011	0.2
Mg	Thermo6500	0.019	0.025	0.085	1
Mn	Thermo6500	0.001	0.002	0.003	0.01
Mo	Thermo6500	0.003	0.005	0.010	0.01
Na	Thermo6500	0.020	0.050	0.048	1
Ni	Thermo6500	0.002	0.005	0.006	0.01
Pb	Thermo6500	0.003	0.005	0.006	0.01
Sb	Thermo6500	0.006	0.010	0.014	0.05
Se	Thermo6500	0.004	0.010	0.013	0.04
Si	Thermo6500	0.008	0.020	0.015	0.2
Sn	Thermo6500	0.003	0.005	0.002	0.01
Sr	Thermo6500	0.000	0.001	0.002	0.005
Ti	Thermo6500	0.001	0.002	0.002	0.01
Tl	Thermo6500	0.008	0.020	0.015	0.03
V	Thermo6500	0.002	0.002	0.005	0.01
Zn	Thermo6500	0.002	0.005	0.005	0.03



## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Job ID: 600-113192-1**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-113192-1

#### Comments

The report was revised on 7/27/15 to report lead in samples 13 and 43, replacing the final report generated on 6/25/15.

#### Receipt

The samples were received on 6/11/2015 9:22 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

#### Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): SCC-5C 0-0.5 (600-113192-43)

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113192-1	2015-SCC-16A 0-0.5	Solid	06/10/15 09:35	06/11/15 09:22
600-113192-4	2015-SCC-16B 0-0.5	Solid	06/10/15 10:05	06/11/15 09:22
600-113192-7	2015-SCC-16C 0-0.5	Solid	06/10/15 09:55	06/11/15 09:22
600-113192-10	2015-SCC-16D 0.5-2	Solid	06/10/15 09:45	06/11/15 09:22
600-113192-12	Dup-04	Solid	06/10/15 00:00	06/11/15 09:22
600-113192-13	SCC-5C 0.5-2	Solid	06/10/15 10:25	06/11/15 09:22
600-113192-15	D-11D 0-0.5	Solid	06/10/15 13:55	06/11/15 09:22
600-113192-18	D-11E 0-0.5	Solid	06/10/15 13:40	06/11/15 09:22
600-113192-21	D-11C 0.5-2	Solid	06/10/15 13:45	06/11/15 09:22
600-113192-23	Dup-06	Solid	06/10/15 00:00	06/11/15 09:22
600-113192-24	2015-MW-17C 0-0.5	Solid	06/10/15 13:05	06/11/15 09:22
600-113192-27	2015-MW-17D 0.5-2	Solid	06/10/15 13:10	06/11/15 09:22
600-113192-30	ECO-5-A 0-0.5	Solid	06/10/15 10:40	06/11/15 09:22
600-113192-33	E-11C-C 0-0.5	Solid	06/10/15 14:40	06/11/15 09:22
600-113192-36	E-11C-D 0-0.5	Solid	06/10/15 14:30	06/11/15 09:22
600-113192-39	E-11C-B 2.4	Solid	06/10/15 14:10	06/11/15 09:22
600-113192-42	Equipment Blank	Water	06/10/15 16:00	06/11/15 09:22
600-113192-43	SCC-5C 0-0.5	Solid	06/10/15 10:25	06/11/15 09:22

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-SCC-16A 0-0.5**

Date Collected: 06/10/15 09:35

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	82		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-SCC-16A 0-0.5**

Date Collected: 06/10/15 09:35

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-1**

Matrix: Solid

Percent Solids: 82.4

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	582		2.86	0.601	mg/Kg	☼	06/19/15 15:55	06/23/15 15:49	5

**Client Sample ID: 2015-SCC-16B 0-0.5**

Date Collected: 06/10/15 10:05

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-4**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	87		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: 2015-SCC-16B 0-0.5**

Date Collected: 06/10/15 10:05

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-4**

Matrix: Solid

Percent Solids: 87.0

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2010		2.79	0.586	mg/Kg	☼	06/19/15 15:55	06/23/15 15:51	5

**Client Sample ID: 2015-SCC-16C 0-0.5**

Date Collected: 06/10/15 09:55

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-7**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	79		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: 2015-SCC-16C 0-0.5**

Date Collected: 06/10/15 09:55

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-7**

Matrix: Solid

Percent Solids: 78.5

## Method: 6010B - Metals (ICP) - DL2

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	810		5.95	1.25	mg/Kg	☼	06/19/15 15:55	06/23/15 17:15	10

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-SCC-16D 0.5-2**

**Lab Sample ID: 600-113192-10**

Date Collected: 06/10/15 09:45

Matrix: Solid

Date Received: 06/11/15 09:22

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	80		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: 2015-SCC-16D 0.5-2**

**Lab Sample ID: 600-113192-10**

Date Collected: 06/10/15 09:45

Matrix: Solid

Date Received: 06/11/15 09:22

Percent Solids: 79.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	40.8		2.90	0.609	mg/Kg	☼	06/19/15 15:55	06/22/15 17:03	5

**Client Sample ID: Dup-04**

**Lab Sample ID: 600-113192-12**

Date Collected: 06/10/15 00:00

Matrix: Solid

Date Received: 06/11/15 09:22

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	80		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: Dup-04**

**Lab Sample ID: 600-113192-12**

Date Collected: 06/10/15 00:00

Matrix: Solid

Date Received: 06/11/15 09:22

Percent Solids: 79.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	27.6		2.95	0.620	mg/Kg	☼	06/19/15 15:55	06/23/15 15:56	5

**Client Sample ID: SCC-5C 0.5-2**

**Lab Sample ID: 600-113192-13**

Date Collected: 06/10/15 10:25

Matrix: Solid

Date Received: 06/11/15 09:22

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	86		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: SCC-5C 0.5-2**

**Lab Sample ID: 600-113192-13**

Date Collected: 06/10/15 10:25

Matrix: Solid

Date Received: 06/11/15 09:22

Percent Solids: 85.9

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	8.81		2.91	0.270	mg/Kg	☼	06/19/15 15:55	06/22/15 17:45	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	5160		2.91	0.611	mg/Kg	☼	06/19/15 15:55	06/23/15 16:05	5

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: D-11D 0-0.5**

**Date Collected: 06/10/15 13:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-15**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	79		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: D-11D 0-0.5**

**Date Collected: 06/10/15 13:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-15**

**Matrix: Solid**

**Percent Solids: 78.6**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	8.89		1.21	0.264	mg/Kg	☼	06/19/15 15:55	06/22/15 17:52	1

**Client Sample ID: D-11E 0-0.5**

**Date Collected: 06/10/15 13:40**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-18**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	78		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: D-11E 0-0.5**

**Date Collected: 06/10/15 13:40**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-18**

**Matrix: Solid**

**Percent Solids: 78.2**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28.3		1.18	0.258	mg/Kg	☼	06/19/15 15:55	06/22/15 17:54	1

**Client Sample ID: D-11C 0.5-2**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-21**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	76		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: D-11C 0.5-2**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-21**

**Matrix: Solid**

**Percent Solids: 75.9**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16.9		1.32	0.287	mg/Kg	☼	06/19/15 15:55	06/22/15 17:56	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: Dup-06**

**Date Collected: 06/10/15 00:00**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-23**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	74		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: Dup-06**

**Date Collected: 06/10/15 00:00**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-23**

**Matrix: Solid**

**Percent Solids: 74.3**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.25		1.31	0.285	mg/Kg	☼	06/19/15 15:55	06/22/15 18:05	1

**Client Sample ID: 2015-MW-17C 0-0.5**

**Date Collected: 06/10/15 13:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-24**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	80		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: 2015-MW-17C 0-0.5**

**Date Collected: 06/10/15 13:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-24**

**Matrix: Solid**

**Percent Solids: 79.6**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.611	J	2.96	0.275	mg/Kg	☼	06/19/15 15:55	06/22/15 18:07	1
Arsenic	19.5		1.19	0.258	mg/Kg	☼	06/19/15 15:55	06/22/15 18:07	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	42.2		2.96	0.622	mg/Kg	☼	06/19/15 15:55	06/23/15 16:24	5

**Client Sample ID: 2015-MW-17D 0.5-2**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-27**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	82		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: 2015-MW-17D 0.5-2**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-27**

**Matrix: Solid**

**Percent Solids: 82.2**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	20.6		2.84	0.264	mg/Kg	☼	06/19/15 15:55	06/22/15 18:09	1
Arsenic	24.7		1.14	0.248	mg/Kg	☼	06/19/15 15:55	06/22/15 18:09	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-MW-17D 0.5-2**

Date Collected: 06/10/15 13:10

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-27**

Matrix: Solid

Percent Solids: 82.2

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1600		2.84	0.597	mg/Kg	☼	06/19/15 15:55	06/23/15 16:26	5

**Client Sample ID: ECO-5-A 0-0.5**

Date Collected: 06/10/15 10:40

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-30**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	81		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: ECO-5-A 0-0.5**

Date Collected: 06/10/15 10:40

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-30**

Matrix: Solid

Percent Solids: 80.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.266	U	2.86	0.266	mg/Kg	☼	06/22/15 15:11	06/23/15 13:24	1
Arsenic	15.1		1.15	0.250	mg/Kg	☼	06/22/15 15:11	06/23/15 13:24	1

**Client Sample ID: E-11C-C 0-0.5**

Date Collected: 06/10/15 14:40

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-33**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	77		1.0	1.0	%			06/12/15 18:08	1

**Client Sample ID: E-11C-C 0-0.5**

Date Collected: 06/10/15 14:40

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-33**

Matrix: Solid

Percent Solids: 76.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.3		1.19	0.261	mg/Kg	☼	06/22/15 15:11	06/23/15 13:34	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	704		2.99	0.627	mg/Kg	☼	06/22/15 15:11	06/23/15 16:38	5

**Client Sample ID: E-11C-D 0-0.5**

Date Collected: 06/10/15 14:30

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-36**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	79		1.0	1.0	%			06/12/15 18:08	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Client Sample ID: E-11C-D 0-0.5

Date Collected: 06/10/15 14:30

Date Received: 06/11/15 09:22

## Lab Sample ID: 600-113192-36

Matrix: Solid

Percent Solids: 78.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16.2		1.17	0.254	mg/Kg	☼	06/22/15 15:11	06/23/15 13:36	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	155		2.92	0.613	mg/Kg	☼	06/22/15 15:11	06/23/15 16:40	5

## Client Sample ID: E-11C-B 2.4

Date Collected: 06/10/15 14:10

Date Received: 06/11/15 09:22

## Lab Sample ID: 600-113192-39

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			06/12/15 18:08	1
Percent Solids	78		1.0	1.0	%			06/12/15 18:08	1

## Client Sample ID: E-11C-B 2.4

Date Collected: 06/10/15 14:10

Date Received: 06/11/15 09:22

## Lab Sample ID: 600-113192-39

Matrix: Solid

Percent Solids: 78.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.95		1.22	0.266	mg/Kg	☼	06/22/15 15:11	06/23/15 13:39	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	19.0		3.05	0.640	mg/Kg	☼	06/22/15 15:11	06/23/15 16:42	5

## Client Sample ID: Equipment Blank

Date Collected: 06/10/15 16:00

Date Received: 06/11/15 09:22

## Lab Sample ID: 600-113192-42

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		06/22/15 08:40	06/22/15 16:34	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		06/22/15 08:40	06/22/15 16:34	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		06/22/15 08:40	06/22/15 16:34	1
Lead	0.00405	J	0.0100	0.00290	mg/L		06/22/15 08:40	06/22/15 16:34	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		06/22/15 08:40	06/22/15 16:34	1

## Client Sample ID: SCC-5C 0-0.5

Date Collected: 06/10/15 10:25

Date Received: 06/11/15 09:22

## Lab Sample ID: 600-113192-43

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	84		1.0	1.0	%			06/15/15 17:42	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: SCC-5C 0-0.5**

**Lab Sample ID: 600-113192-43**

**Date Collected: 06/10/15 10:25**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 84.3**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.05	J	2.75	0.255	mg/Kg	☼	06/22/15 15:11	06/23/15 13:41	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1580		5.49	1.15	mg/Kg	☼	06/22/15 15:11	06/23/15 16:44	10

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
U	Analyte was not detected at or above the SDL.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the control limits

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-165116/1-A  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/19/15 15:55	06/22/15 15:33	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/19/15 15:55	06/22/15 15:33	1

Lab Sample ID: LCSSRM 600-165116/2-A  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	108	106.7		mg/Kg		98.8	0.9 - 214.8
Arsenic	151	144.5		mg/Kg		95.7	80.8 - 119.9
Cadmium	152	141.4		mg/Kg		93.0	81.6 - 117.8
Lead	254	232.8		mg/Kg		91.7	81.5 - 120.9
Selenium	162	152.9		mg/Kg		94.4	77.2 - 122.2

Lab Sample ID: 600-113192-10 MS  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: 2015-SCC-16D 0.5-2  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.480	J	59.1	30.82	N1	mg/Kg	☼	51	75 - 125
Arsenic	9.74		59.1	62.20		mg/Kg	☼	89	75 - 125
Selenium	0.300	U	59.1	48.01		mg/Kg	☼	81	75 - 125

Lab Sample ID: 600-113192-10 MSD  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: 2015-SCC-16D 0.5-2  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.480	J	56.9	28.57	N1	mg/Kg	☼	49	75 - 125	8	20
Arsenic	9.74		56.9	59.60		mg/Kg	☼	88	75 - 125	4	20
Selenium	0.300	U	56.9	45.35		mg/Kg	☼	80	75 - 125	6	20

Lab Sample ID: 600-113192-21 MS  
Matrix: Solid  
Analysis Batch: 165242

Client Sample ID: D-11C 0.5-2  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	1.98	J	65.2	38.31	N1	mg/Kg	☼	56	75 - 125
Arsenic	16.9		65.2	59.55	N1	mg/Kg	☼	65	75 - 125
Selenium	0.341	U	65.2	45.38	N1	mg/Kg	☼	70	75 - 125

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

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

Lab Sample ID: 600-113192-21 MSD

Matrix: Solid

Analysis Batch: 165242

Client Sample ID: D-11C 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	1.98	J	65.2	41.72	N1	mg/Kg	☼	61	75 - 125	9	20
Arsenic	16.9		65.2	65.90		mg/Kg	☼	75	75 - 125	10	20
Selenium	0.341	U	65.2	50.12		mg/Kg	☼	77	75 - 125	10	20

Lab Sample ID: 600-113192-10 DU

Matrix: Solid

Analysis Batch: 165242

Client Sample ID: 2015-SCC-16D 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.480	J	0.4717	J	mg/Kg	☼	2	20
Arsenic	9.74		9.689		mg/Kg	☼	0.5	20
Selenium	0.300	U	0.303	U	mg/Kg	☼	NC	20

Lab Sample ID: 600-113192-21 DU

Matrix: Solid

Analysis Batch: 165242

Client Sample ID: D-11C 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	1.98	J	2.386	J	mg/Kg	☼	19	20
Arsenic	16.9		17.17		mg/Kg	☼	2	20
Selenium	0.341	U	0.335	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-165170/1-A

Matrix: Water

Analysis Batch: 165242

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 165170

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		06/22/15 08:40	06/22/15 15:15	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		06/22/15 08:40	06/22/15 15:15	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		06/22/15 08:40	06/22/15 15:15	1
Lead	0.00290	U	0.0100	0.00290	mg/L		06/22/15 08:40	06/22/15 15:15	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		06/22/15 08:40	06/22/15 15:15	1

Lab Sample ID: LCS 600-165170/2-A

Matrix: Water

Analysis Batch: 165242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 165170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1.00	1.057		mg/L		106	80 - 120
Arsenic	1.00	1.039		mg/L		104	80 - 120
Cadmium	0.500	0.5238		mg/L		105	80 - 120
Lead	1.00	1.056		mg/L		106	80 - 120
Selenium	1.00	1.041		mg/L		104	80 - 120

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

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

Lab Sample ID: 600-113524-C-1-C MS

Matrix: Water

Analysis Batch: 165242

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 165170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.00630	U	1.00	1.008		mg/L		101	75 - 125
Arsenic	0.00969	J	1.00	1.134		mg/L		112	75 - 125
Cadmium	0.000350	U	0.500	0.5219		mg/L		104	75 - 125
Lead	0.00290	U	1.00	1.035		mg/L		104	75 - 125
Selenium	0.0917		1.00	1.188		mg/L		110	75 - 125

Lab Sample ID: 600-113524-C-1-D MSD

Matrix: Water

Analysis Batch: 165242

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 165170

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.00630	U	1.00	1.016		mg/L		102	75 - 125	1	20
Arsenic	0.00969	J	1.00	1.132		mg/L		112	75 - 125	0	20
Cadmium	0.000350	U	0.500	0.5236		mg/L		105	75 - 125	0	20
Lead	0.00290	U	1.00	1.037		mg/L		104	75 - 125	0	20
Selenium	0.0917		1.00	1.194		mg/L		110	75 - 125	1	20

Lab Sample ID: 600-113524-C-1-B DU

Matrix: Water

Analysis Batch: 165242

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 165170

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.00630	U	0.00630	U	mg/L		NC	20
Arsenic	0.00969	J	0.008330	J	mg/L		15	20
Cadmium	0.000350	U	0.000350	U	mg/L		NC	20
Lead	0.00290	U	0.00290	U	mg/L		NC	20
Selenium	0.0917		0.09448		mg/L		3	20

Lab Sample ID: MB 600-165237/1-A

Matrix: Solid

Analysis Batch: 165305

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 165237

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/22/15 15:11	06/23/15 13:05	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/22/15 15:11	06/23/15 13:05	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/22/15 15:11	06/23/15 13:05	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/22/15 15:11	06/23/15 13:05	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/22/15 15:11	06/23/15 13:05	1

Lab Sample ID: LCSSRM 600-165237/2-A

Matrix: Solid

Analysis Batch: 165305

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 165237

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	108	77.64		mg/Kg		71.9	0.9 - 214.8
Arsenic	151	152.8		mg/Kg		101.2	80.8 - 119.9
Cadmium	152	147.9		mg/Kg		97.3	81.6 - 117.8

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

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

Lab Sample ID: LCSSRM 600-165237/2-A  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 165237

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	254	246.9		mg/Kg		97.2	81.5 - 120.9
Selenium	162	159.7		mg/Kg		98.6	77.2 - 122.2

Lab Sample ID: 600-113451-A-28-F MS  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 165237

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.249	U	57.9	25.18	N1	mg/Kg	☼	44	75 - 125
Arsenic	2.31		57.9	62.64		mg/Kg	☼	104	75 - 125
Cadmium	0.0275	U	28.9	29.69		mg/Kg	☼	103	75 - 125
Lead	5.26		57.9	63.97		mg/Kg	☼	101	75 - 125
Selenium	0.278	U	57.9	56.92		mg/Kg	☼	98	75 - 125

Lab Sample ID: 600-113451-A-28-G MSD  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 165237

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.249	U	56.8	23.34	N1	mg/Kg	☼	41	75 - 125	8	20
Arsenic	2.31		56.8	62.56		mg/Kg	☼	106	75 - 125	0	20
Cadmium	0.0275	U	28.4	29.20		mg/Kg	☼	103	75 - 125	2	20
Lead	5.26		56.8	63.30		mg/Kg	☼	102	75 - 125	1	20
Selenium	0.278	U	56.8	56.09		mg/Kg	☼	99	75 - 125	1	20

Lab Sample ID: 600-113566-A-6-D MS  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 165237

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1.59	J	71.0	21.91	N1	mg/Kg	☼	29	75 - 125
Arsenic	11.9		71.0	79.40		mg/Kg	☼	95	75 - 125
Cadmium	0.188	J	35.5	35.47		mg/Kg	☼	99	75 - 125
Selenium	0.375	U	71.0	64.63		mg/Kg	☼	91	75 - 125

Lab Sample ID: 600-113451-A-28-E DU  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 165237

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.249	U	0.254	U	mg/Kg	☼	NC	20
Arsenic	2.31		2.863		mg/Kg	☼	21	20
Cadmium	0.0275	U	0.0280	U	mg/Kg	☼	NC	20
Lead	5.26		6.153		mg/Kg	☼	16	20
Selenium	0.278	U	0.3279	J	mg/Kg	☼	NC	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

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

Lab Sample ID: 600-113566-A-6-C DU

Matrix: Solid

Analysis Batch: 165305

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 165237

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	1.59	J	0.326	U	mg/Kg	☼	NC	20
Arsenic	11.9		10.01		mg/Kg	☼	17	20
Cadmium	0.188	J	0.1686	J	mg/Kg	☼	11	20
Selenium	0.375	U	0.364	U	mg/Kg	☼	NC	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-113192-10 MS

Matrix: Solid

Analysis Batch: 165206

Client Sample ID: 2015-SCC-16D 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium - DL	0.348	J	29.5	31.34		mg/Kg	☼	105	75 - 125		
Lead - DL	40.8		59.1	110.0		mg/Kg	☼	117	75 - 125		

Lab Sample ID: 600-113192-10 MSD

Matrix: Solid

Analysis Batch: 165206

Client Sample ID: 2015-SCC-16D 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium - DL	0.348	J	28.5	29.97		mg/Kg	☼	104	75 - 125	4	20
Lead - DL	40.8		56.9	73.52	N1 N2	mg/Kg	☼	57	75 - 125	40	20

Lab Sample ID: 600-113192-21 MS

Matrix: Solid

Analysis Batch: 165305

Client Sample ID: D-11C 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium - DL	1.53		32.6	30.23		mg/Kg	☼	88	75 - 125		
Lead - DL	239		65.2	102.9	N1	mg/Kg	☼	-208	75 - 125		

Lab Sample ID: 600-113192-21 MSD

Matrix: Solid

Analysis Batch: 165305

Client Sample ID: D-11C 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Cadmium - DL	1.53		32.6	32.86		mg/Kg	☼	96	75 - 125	8	20
Lead - DL	239		65.2	150.8	N1 N2	mg/Kg	☼	-135	75 - 125	38	20

Lab Sample ID: 600-113192-10 DU

Matrix: Solid

Analysis Batch: 165206

Client Sample ID: 2015-SCC-16D 0.5-2

Prep Type: Total/NA

Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cadmium - DL	0.348	J	0.3219	J	mg/Kg	☼	8	20
Lead - DL	40.8		28.91	F	mg/Kg	☼	34	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Method: 6010B - Metals (ICP) - DL (Continued)

Lab Sample ID: 600-113192-21 DU  
Matrix: Solid  
Analysis Batch: 165305

Client Sample ID: D-11C 0.5-2  
Prep Type: Total/NA  
Prep Batch: 165116

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium - DL	1.53		1.680		mg/Kg	✖	9	20
Lead - DL	239		305.7	F	mg/Kg	✖	25	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113192-4 DU  
Matrix: Solid  
Analysis Batch: 164564

Client Sample ID: 2015-SCC-16B 0-0.5  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	13		14		%		6	20
Percent Solids	87		86		%		0.9	20

Lab Sample ID: 600-113192-27 DU  
Matrix: Solid  
Analysis Batch: 164564

Client Sample ID: 2015-MW-17D 0.5-2  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	18		17		%		3	20
Percent Solids	82		83		%		0.6	20

Lab Sample ID: 600-113146-B-1 DU  
Matrix: Solid  
Analysis Batch: 164679

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	12		12		%		0.6	20
Percent Solids	88		88		%		0.09	20

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 600-113192-A-10-A SD ^5

SDG No: \_\_\_\_\_

Lab Name: TestAmerica Houston

Job No: 600-113063-1

Matrix: Solid

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I) C	Serial Dilution Result (S) C	% Difference	Q	Method
Antimony	0.480 J	1.35 U	NC		6010B
Arsenic	9.74	11.73	NC		6010B
Cadmium	1.18	0.4995 J	NC		6010B
Lead	33.2	42.07	27	*	6010B
Selenium	0.300 U	1.50 U	NC		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Antimony	0.0500	0.00630	mg/L	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Arsenic	0.0100	0.00328	mg/L	6010B
Cadmium	0.00500	0.000350	mg/L	6010B
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B
Selenium	0.0400	0.00417	mg/L	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Metals

### Prep Batch: 165116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-1 - DL	2015-SCC-16A 0-0.5	Total/NA	Solid	3050B	
600-113192-4 - DL	2015-SCC-16B 0-0.5	Total/NA	Solid	3050B	
600-113192-7 - DL2	2015-SCC-16C 0-0.5	Total/NA	Solid	3050B	
600-113192-10 - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 DU	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 DU - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 MS	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 MS - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 MSD	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-10 MSD - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	3050B	
600-113192-12 - DL	Dup-04	Total/NA	Solid	3050B	
600-113192-13	SCC-5C 0.5-2	Total/NA	Solid	3050B	
600-113192-13 - DL	SCC-5C 0.5-2	Total/NA	Solid	3050B	
600-113192-15	D-11D 0-0.5	Total/NA	Solid	3050B	
600-113192-18	D-11E 0-0.5	Total/NA	Solid	3050B	
600-113192-21	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 DU	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 DU - DL	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 MS	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 MS - DL	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 MSD	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-21 MSD - DL	D-11C 0.5-2	Total/NA	Solid	3050B	
600-113192-23	Dup-06	Total/NA	Solid	3050B	
600-113192-24	2015-MW-17C 0-0.5	Total/NA	Solid	3050B	
600-113192-24 - DL	2015-MW-17C 0-0.5	Total/NA	Solid	3050B	
600-113192-27	2015-MW-17D 0.5-2	Total/NA	Solid	3050B	
600-113192-27 - DL	2015-MW-17D 0.5-2	Total/NA	Solid	3050B	
LCSSRM 600-165116/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165116/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 165170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-42	Equipment Blank	Total/NA	Water	3010A	
600-113524-C-1-B DU	Duplicate	Total/NA	Water	3010A	
600-113524-C-1-C MS	Matrix Spike	Total/NA	Water	3010A	
600-113524-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
LCS 600-165170/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-165170/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 165206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-10 - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-10 DU - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-10 MS - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-10 MSD - DL	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116

### Prep Batch: 165237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-30	ECO-5-A 0-0.5	Total/NA	Solid	3050B	
600-113192-33 - DL	E-11C-C 0-0.5	Total/NA	Solid	3050B	
600-113192-33	E-11C-C 0-0.5	Total/NA	Solid	3050B	

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Metals (Continued)

### Prep Batch: 165237 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-36	E-11C-D 0-0.5	Total/NA	Solid	3050B	
600-113192-36 - DL	E-11C-D 0-0.5	Total/NA	Solid	3050B	
600-113192-39	E-11C-B 2.4	Total/NA	Solid	3050B	
600-113192-39 - DL	E-11C-B 2.4	Total/NA	Solid	3050B	
600-113192-43	SCC-5C 0-0.5	Total/NA	Solid	3050B	
600-113192-43 - DL	SCC-5C 0-0.5	Total/NA	Solid	3050B	
600-113451-A-28-E DU	Duplicate	Total/NA	Solid	3050B	
600-113451-A-28-F MS	Matrix Spike	Total/NA	Solid	3050B	
600-113451-A-28-G MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	
600-113566-A-6-C DU	Duplicate	Total/NA	Solid	3050B	
600-113566-A-6-D MS	Matrix Spike	Total/NA	Solid	3050B	
LCSSRM 600-165237/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165237/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 165242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-10 DU	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-10 MS	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-10 MSD	2015-SCC-16D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-13	SCC-5C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-15	D-11D 0-0.5	Total/NA	Solid	6010B	165116
600-113192-18	D-11E 0-0.5	Total/NA	Solid	6010B	165116
600-113192-21	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 DU	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 MS	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 MSD	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-23	Dup-06	Total/NA	Solid	6010B	165116
600-113192-24	2015-MW-17C 0-0.5	Total/NA	Solid	6010B	165116
600-113192-27	2015-MW-17D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-42	Equipment Blank	Total/NA	Water	6010B	165170
600-113524-C-1-B DU	Duplicate	Total/NA	Water	6010B	165170
600-113524-C-1-C MS	Matrix Spike	Total/NA	Water	6010B	165170
600-113524-C-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	6010B	165170
LCS 600-165170/2-A	Lab Control Sample	Total/NA	Water	6010B	165170
LCSSRM 600-165116/2-A	Lab Control Sample	Total/NA	Solid	6010B	165116
MB 600-165116/1-A	Method Blank	Total/NA	Solid	6010B	165116
MB 600-165170/1-A	Method Blank	Total/NA	Water	6010B	165170

### Analysis Batch: 165305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-1 - DL	2015-SCC-16A 0-0.5	Total/NA	Solid	6010B	165116
600-113192-4 - DL	2015-SCC-16B 0-0.5	Total/NA	Solid	6010B	165116
600-113192-7 - DL2	2015-SCC-16C 0-0.5	Total/NA	Solid	6010B	165116
600-113192-12 - DL	Dup-04	Total/NA	Solid	6010B	165116
600-113192-13 - DL	SCC-5C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 DU - DL	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 MS - DL	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-21 MSD - DL	D-11C 0.5-2	Total/NA	Solid	6010B	165116
600-113192-24 - DL	2015-MW-17C 0-0.5	Total/NA	Solid	6010B	165116
600-113192-27 - DL	2015-MW-17D 0.5-2	Total/NA	Solid	6010B	165116
600-113192-30	ECO-5-A 0-0.5	Total/NA	Solid	6010B	165237

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Metals (Continued)

### Analysis Batch: 165305 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-33	E-11C-C 0-0.5	Total/NA	Solid	6010B	165237
600-113192-33 - DL	E-11C-C 0-0.5	Total/NA	Solid	6010B	165237
600-113192-36	E-11C-D 0-0.5	Total/NA	Solid	6010B	165237
600-113192-36 - DL	E-11C-D 0-0.5	Total/NA	Solid	6010B	165237
600-113192-39	E-11C-B 2.4	Total/NA	Solid	6010B	165237
600-113192-39 - DL	E-11C-B 2.4	Total/NA	Solid	6010B	165237
600-113192-43	SCC-5C 0-0.5	Total/NA	Solid	6010B	165237
600-113192-43 - DL	SCC-5C 0-0.5	Total/NA	Solid	6010B	165237
600-113451-A-28-E DU	Duplicate	Total/NA	Solid	6010B	165237
600-113451-A-28-F MS	Matrix Spike	Total/NA	Solid	6010B	165237
600-113451-A-28-G MSD	Matrix Spike Duplicate	Total/NA	Solid	6010B	165237
600-113566-A-6-C DU	Duplicate	Total/NA	Solid	6010B	165237
600-113566-A-6-D MS	Matrix Spike	Total/NA	Solid	6010B	165237
LCSSRM 600-165237/2-A	Lab Control Sample	Total/NA	Solid	6010B	165237
MB 600-165237/1-A	Method Blank	Total/NA	Solid	6010B	165237

## General Chemistry

### Analysis Batch: 164564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-4	2015-SCC-16B 0-0.5	Total/NA	Solid	Moisture	
600-113192-4 DU	2015-SCC-16B 0-0.5	Total/NA	Solid	Moisture	
600-113192-7	2015-SCC-16C 0-0.5	Total/NA	Solid	Moisture	
600-113192-10	2015-SCC-16D 0.5-2	Total/NA	Solid	Moisture	
600-113192-10 MS	2015-SCC-16D 0.5-2	Total/NA	Solid	Moisture	
600-113192-10 MSD	2015-SCC-16D 0.5-2	Total/NA	Solid	Moisture	
600-113192-12	Dup-04	Total/NA	Solid	Moisture	
600-113192-13	SCC-5C 0.5-2	Total/NA	Solid	Moisture	
600-113192-15	D-11D 0-0.5	Total/NA	Solid	Moisture	
600-113192-18	D-11E 0-0.5	Total/NA	Solid	Moisture	
600-113192-21	D-11C 0.5-2	Total/NA	Solid	Moisture	
600-113192-21 MS	D-11C 0.5-2	Total/NA	Solid	Moisture	
600-113192-21 MSD	D-11C 0.5-2	Total/NA	Solid	Moisture	
600-113192-23	Dup-06	Total/NA	Solid	Moisture	
600-113192-24	2015-MW-17C 0-0.5	Total/NA	Solid	Moisture	
600-113192-27	2015-MW-17D 0.5-2	Total/NA	Solid	Moisture	
600-113192-27 DU	2015-MW-17D 0.5-2	Total/NA	Solid	Moisture	
600-113192-30	ECO-5-A 0-0.5	Total/NA	Solid	Moisture	
600-113192-33	E-11C-C 0-0.5	Total/NA	Solid	Moisture	
600-113192-36	E-11C-D 0-0.5	Total/NA	Solid	Moisture	
600-113192-39	E-11C-B 2.4	Total/NA	Solid	Moisture	

### Analysis Batch: 164679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113146-B-1 DU	Duplicate	Total/NA	Solid	Moisture	
600-113192-1	2015-SCC-16A 0-0.5	Total/NA	Solid	Moisture	
600-113192-43	SCC-5C 0-0.5	Total/NA	Solid	Moisture	
600-113214-A-5 MS	Matrix Spike	Total/NA	Solid	Moisture	
600-113214-A-5 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-SCC-16A 0-0.5**

**Date Collected: 06/10/15 09:35**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16A 0-0.5**

**Date Collected: 06/10/15 09:35**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-1**

**Matrix: Solid**

**Percent Solids: 82.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	165305	06/23/15 15:49	DCL	TAL HOU

**Client Sample ID: 2015-SCC-16B 0-0.5**

**Date Collected: 06/10/15 10:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-4**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16B 0-0.5**

**Date Collected: 06/10/15 10:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-4**

**Matrix: Solid**

**Percent Solids: 87.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.03 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	165305	06/23/15 15:51	DCL	TAL HOU

**Client Sample ID: 2015-SCC-16C 0-0.5**

**Date Collected: 06/10/15 09:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16C 0-0.5**

**Date Collected: 06/10/15 09:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-7**

**Matrix: Solid**

**Percent Solids: 78.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL2		1.07 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL2	10	1.07 g	50 mL	165305	06/23/15 17:15	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-SCC-16D 0.5-2**

**Lab Sample ID: 600-113192-10**

**Date Collected: 06/10/15 09:45**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16D 0.5-2**

**Lab Sample ID: 600-113192-10**

**Date Collected: 06/10/15 09:45**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 79.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.08 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.08 g	50 mL	165206	06/22/15 17:03	DCL	TAL HOU

**Client Sample ID: Dup-04**

**Lab Sample ID: 600-113192-12**

**Date Collected: 06/10/15 00:00**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: Dup-04**

**Lab Sample ID: 600-113192-12**

**Date Collected: 06/10/15 00:00**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 79.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	165305	06/23/15 15:56	DCL	TAL HOU

**Client Sample ID: SCC-5C 0.5-2**

**Lab Sample ID: 600-113192-13**

**Date Collected: 06/10/15 10:25**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: SCC-5C 0.5-2**

**Lab Sample ID: 600-113192-13**

**Date Collected: 06/10/15 10:25**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 85.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	165242	06/22/15 17:45	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.00 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.00 g	50 mL	165305	06/23/15 16:05	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: D-11D 0-0.5**

**Date Collected: 06/10/15 13:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-15**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: D-11D 0-0.5**

**Date Collected: 06/10/15 13:55**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-15**

**Matrix: Solid**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	165242	06/22/15 17:52	DCL	TAL HOU

**Client Sample ID: D-11E 0-0.5**

**Date Collected: 06/10/15 13:40**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-18**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: D-11E 0-0.5**

**Date Collected: 06/10/15 13:40**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-18**

**Matrix: Solid**

**Percent Solids: 78.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	165242	06/22/15 17:54	DCL	TAL HOU

**Client Sample ID: D-11C 0.5-2**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-21**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: D-11C 0.5-2**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-21**

**Matrix: Solid**

**Percent Solids: 75.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	165242	06/22/15 17:56	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: Dup-06**

**Date Collected: 06/10/15 00:00**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-23**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: Dup-06**

**Date Collected: 06/10/15 00:00**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-23**

**Matrix: Solid**

**Percent Solids: 74.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	165242	06/22/15 18:05	DCL	TAL HOU

**Client Sample ID: 2015-MW-17C 0-0.5**

**Date Collected: 06/10/15 13:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-24**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: 2015-MW-17C 0-0.5**

**Date Collected: 06/10/15 13:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-24**

**Matrix: Solid**

**Percent Solids: 79.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	165242	06/22/15 18:07	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	165305	06/23/15 16:24	DCL	TAL HOU

**Client Sample ID: 2015-MW-17D 0.5-2**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-27**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: 2015-MW-17D 0.5-2**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-27**

**Matrix: Solid**

**Percent Solids: 82.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	165242	06/22/15 18:09	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.07 g	50 mL	165116	06/19/15 15:55	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: 2015-MW-17D 0.5-2**

**Lab Sample ID: 600-113192-27**

**Date Collected: 06/10/15 13:10**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 82.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B	DL	5	1.07 g	50 mL	165305	06/23/15 16:26	DCL	TAL HOU

**Client Sample ID: ECO-5-A 0-0.5**

**Lab Sample ID: 600-113192-30**

**Date Collected: 06/10/15 10:40**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: ECO-5-A 0-0.5**

**Lab Sample ID: 600-113192-30**

**Date Collected: 06/10/15 10:40**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 80.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	165305	06/23/15 13:24	DCL	TAL HOU

**Client Sample ID: E-11C-C 0-0.5**

**Lab Sample ID: 600-113192-33**

**Date Collected: 06/10/15 14:40**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: E-11C-C 0-0.5**

**Lab Sample ID: 600-113192-33**

**Date Collected: 06/10/15 14:40**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 76.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	165305	06/23/15 13:34	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	165305	06/23/15 16:38	DCL	TAL HOU

**Client Sample ID: E-11C-D 0-0.5**

**Lab Sample ID: 600-113192-36**

**Date Collected: 06/10/15 14:30**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: E-11C-D 0-0.5**

**Lab Sample ID: 600-113192-36**

**Date Collected: 06/10/15 14:30**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	165305	06/23/15 13:36	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	165305	06/23/15 16:40	DCL	TAL HOU

**Client Sample ID: E-11C-B 2.4**

**Lab Sample ID: 600-113192-39**

**Date Collected: 06/10/15 14:10**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164564	06/12/15 18:08	MJB	TAL HOU

**Client Sample ID: E-11C-B 2.4**

**Lab Sample ID: 600-113192-39**

**Date Collected: 06/10/15 14:10**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 78.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	165305	06/23/15 13:39	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.05 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	165305	06/23/15 16:42	DCL	TAL HOU

**Client Sample ID: Equipment Blank**

**Lab Sample ID: 600-113192-42**

**Date Collected: 06/10/15 16:00**

**Matrix: Water**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	165170	06/22/15 08:40	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	165242	06/22/15 16:34	DCL	TAL HOU

**Client Sample ID: SCC-5C 0-0.5**

**Lab Sample ID: 600-113192-43**

**Date Collected: 06/10/15 10:25**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

**Client Sample ID: SCC-5C 0-0.5**

**Lab Sample ID: 600-113192-43**

**Date Collected: 06/10/15 10:25**

**Matrix: Solid**

**Date Received: 06/11/15 09:22**

**Percent Solids: 84.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	165305	06/23/15 13:41	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.08 g	50 mL	165237	06/22/15 15:11	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.08 g	50 mL	165305	06/23/15 16:44	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77249  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record



800-113192 Chain of Custody

<b>Client Information</b>	Sampler	Lab P/N
Client Contact	Phone	E-Mail
Anne Faeth-Boyd	(877) 466 3888	cathy.upton@testamerica.com
Company	Due Date Requested:	Analysis Requested
Golder Associates Inc.		

COC No	Page
600-56678-12035 1	1 of 4

Job #	Preservation Codes:
	A-HCL B-NaOH C-Zn Acetate D-Nitric Acid E-NaHSO4 F-MeOH G-Archer H-Acetic Acid I-Ice J-DI Water K-EDTA L-EDA M-Hexane N-None O-AsNaO2 P-Na2OAS Q-Na2SO3 R-Na2S2O3 S-H2SO4 T-TSP Dodecyl sulfate U-Acetone V-MCAA W-ph 4-5 Z-other (specify)

Address:	820 South Main Street Suite 100	City:	St Charles	State, ZIP:	MO, 63301	Phone:	836-724-9191	PO #:		Purchase Order Requested	W/O #:		Project #:	60006523	SSON#:				
Email:	afae@gholder.com	Project Name:	Exide Recycling Center, Frisco TX	Site:	Exide Recycling Center, Frisco TX	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=ore, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	Moisture - Local Method	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	8260B - (MOD) Target Compound List	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	Total Number of Containers	Special Instructions/Note:
2015-SCC-16A	1-0-5	6/13/15	0935	G	Solid	N	X												Hold
2015-SCC-16A	0-5-2			G	Solid	N													Hold
2015-SCC-16A	2-4			G	Solid	N													Hold
2015-SCC-16B	6-0-5	6/10/15	1005	G	Solid	N	X												Hold
2015-SCC-16B	0-5-2			G	Solid	N													Hold
2015-SCC-16B	2-4			G	Solid	N													Hold
2015-SCC-16C	0-0-5	6/10/15	0955	G	Solid	N	X												Hold
2015-SCC-16C	0-5-2			G	Solid	N													Hold
2015-SCC-16C	2-4			G	Solid	N													Hold
2015-SCC-16D	0-5-2	6/10/15	0945	G	Solid	N	X												MS/MSD provided.
2015-SCC-16D	2-4			G	Solid	N													Hold

# TestAmerica Houston

6314 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

# TestAmerica

### Client Information

Client Contact:  
Anne Faeth-Boyd

Sampler: John Soria XI  
Phone: (832) 416 3888

Lap PM  
Upton, Cathy L

E-Mail:  
cathy.upton@testamerica.com

Camera Tracking No(s):

Page 2 of 4

### Company

Address:  
820 South Main Street Suite 100

Due Date Requested:

City:  
St. Charles

TAT Requested (days):

State, Zip:  
MO, 63301

10 Days

Phone:  
636-724-9191

PO #:  
Purchase Order Requested

Email:  
afaeth@golder.com

WO #:

Project Name:  
Exide Recycling Center, Frisco TX

Project #:  
60006523

Site:  
Exide Recycling Center, Frisco TX

SSOW#:

### Analysis Requested

### Sample Identification

Sample Date

Sample Time

Sample Type  
(C=comp, G=grab)

Matrix  
(W=water, S=solid, O=other)

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

8260B - Target Compound List

Moisture - Local Method

6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb

8260B - (MOD) Target Compound List

6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb

6010B - Pb

6010B - Sb

6010B - As

Total Number of Containers

Special Instructions/Note:

### Preservation Codes:

A - HCL  
B - NaOH  
C - Zn Acetate  
D - Nitric Acid  
E - NaHSO4  
F - MeOH  
G - Ammonia  
H - Ascorbic Acid  
I - Ice  
J - DI Water  
K - EDTA  
L - EDTA  
M - Hexane  
N - None  
O - AsHClO2  
P - Na2OAS  
Q - Na2SO3  
R - Na2S2O3  
S - H2SO4  
T - TSP Dodecylhydrate  
U - Acetone  
V - MCAA  
W - pH 4-5  
Z - other (specify)

### Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested I, II, III, IV, Other (specify)

### Empty Kit Relinquished by:

Date:

Time:

Method of Shipment:

Relinquished by: John Soria XI

Date/Time:

6/10/15 1615

Company:

Received by:

[Signature]

Date/Time:

6/11/15 9:00 AM

Company:

Relinquished by:

Date/Time:

Company:

Received by:

Date/Time:

Company:

Custody Seals Intact:

Custody Seal No.:

Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks:

# TestAmerica Houston

6310 Roß Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5645

## Chain of Custody Record

TestAmerica  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5645

<b>Client Information</b>		Sampler: <u>JNA 5026 X1</u>	Lab PM: <u>Cathy L</u>	Carrier Tracking No(s):	COC No: <u>600-36678-12035.1</u>
Client Contact: <u>Anna Faeth-Boyd</u>		Phone: <u>(512) 416 3889</u>	E-Mail: <u>cathy.upton@testamericainc.com</u>		Page <u>3</u> of <u>4</u>
Company: <u>Goldier Associates Inc.</u>		Due Date Requested:	Analysis Requested: <u>with MSB</u>		
Address: <u>820 South Main Street Suite 100</u>		TAI Requested (days): <u>10 Days</u>			
City: <u>St. Charles</u>					
State, Zip: <u>MO, 63301</u>					
Phone: <u>636-724-9191</u>		PO #			
Email: <u>afaeth@golder.com</u>		Purchase Order Requested			
Project Name: <u>Exide Recycling Center, Frisco TX</u>		Project #			
Site: <u>Exide Recycling Center, Frisco TX</u>		SSOM#			
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)
<u>Dug-06</u>	<u>6/10/15</u>	<u>-</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-AW-17C</u>	<u>6/10/15</u>	<u>13:5</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17C</u>	<u>6/10/15</u>	<u>↓</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17C</u>	<u>6/10/15</u>	<u>↓</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>2015-AW-17D</u>	<u>6/10/15</u>	<u>13:10</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17D</u>	<u>6/10/15</u>	<u>13:10</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>Dup-05</u>	<u>6/10/15</u>	<u>-</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>E0-5-A</u>	<u>6/10/15</u>	<u>10:40</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>E0-5-A</u>	<u>6/10/15</u>	<u>1</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>E0-5-A</u>	<u>6/10/15</u>	<u>2-4</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<u>E-11C-C</u>	<u>6/10/15</u>	<u>14:40</u>	<u>↓</u>	<u>G</u>	<u>Solid</u>
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>3</u> Months			
Deliverable Requested: I, II, III, IV, Other (Specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by		Date:	Time:	Method of Shipment:	
Relinquished by <u>JNA 5026 X1</u>		<u>6/10/15</u>	<u>16:15</u>	Received by <u>ATC (comp)</u>	
Relinquished by		Date/Time	Company	Date/Time	
Relinquished by		Date/Time	Company	Date/Time	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

## Chain of Custody Record

# TestAmerica

مجلس شورای ملی و دولت در ۱۳۰۴

7/27/2015



## Samr Receipt Checklist

Loc: 600  
113192

Date/Time Received:

15 JUN 11 9:22

JOB NUMBER: \_\_\_\_\_

CLIENT:

Golder

UNPACKED BY: \_\_\_\_\_

CARRIER/DRIVER:

FK

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
BW	Y / N	Y / N	3.2	600	0	3.2
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YESBase samples are > pH 12: ☐ YES ☐ NO

Acid preserved are &lt; pH 2:

☒ YES☐ NO

pH paper Lot #

HC432654

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

YES NO

COMMENTS:

SAC-SC-0.0.5 not on cor.



## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113192-1

**Login Number: 113192**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Capps, Dana R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	3.2
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.	False	Received extra samples not listed on COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113192-3

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

7/31/2015 3:14:43 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113192-3 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jeanette Castillo, for Cathy Upton

Name (printed)



Signature

7/31/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/31/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?			X		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?			X		
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/31/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	7/31/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113192-3
Reviewer Name:	Jeanette Castillo, for Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-113192-28 MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: 600-113192-28 MS failed the recovery criteria for the following analyte(s): Lead. Matrix interference is suspected
R07D	Method 6010B: 600-113192-28 MSD failed the RPD criteria for the following analyte(s): Lead.
R08C	Method 6010B: 600-113192-28 DU failed the RPD criteria for the following analyte(s): Lead.
R10B	Method 6010B: The following samples was diluted to bring the concentration of target analytes within calibration range: 2015-SCC-16B 0.5-2 (600-113192-5), D-11C 2-4 (600-113192-22) and 2015-MW-17D 2-4 (600-113192-28). Elevated reporting limits (RLs) are provided.
S09A	Method 6010B: The serial dilution performed for the following sample associated with batch 167744 was outside control limits for Arsenic (11%): (600-113192-A-28-A SD).
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	



**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

**Job ID: 600-113192-3**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-113192-3**

### Comments

No additional comments.

### Receipt

The samples were received on 6/11/2015 9:22 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113192-5	2015-SCC-16B 0.5-2	Solid	06/10/15 10:05	06/11/15 09:22
600-113192-22	D-11C 2-4	Solid	06/10/15 13:45	06/11/15 09:22
600-113192-28	2015-MW-17D 2-4	Solid	06/10/15 13:10	06/11/15 09:22

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

**Client Sample ID: 2015-SCC-16B 0.5-2**

Date Collected: 06/10/15 10:05

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-5**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20	H	1.0	1.0	%			07/21/15 17:11	1
Percent Solids	80	H	1.0	1.0	%			07/21/15 17:11	1

**Client Sample ID: 2015-SCC-16B 0.5-2**

Date Collected: 06/10/15 10:05

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-5**

Matrix: Solid

Percent Solids: 80.1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	16.9		3.06	0.643	mg/Kg	☼	07/24/15 08:30	07/24/15 15:50	5

**Client Sample ID: D-11C 2-4**

Date Collected: 06/10/15 13:45

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-22**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26	H	1.0	1.0	%			07/21/15 17:11	1
Percent Solids	74	H	1.0	1.0	%			07/21/15 17:11	1

**Client Sample ID: D-11C 2-4**

Date Collected: 06/10/15 13:45

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-22**

Matrix: Solid

Percent Solids: 73.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.97		2.60	0.567	mg/Kg	☼	07/24/15 08:30	07/24/15 15:52	2

**Client Sample ID: 2015-MW-17D 2-4**

Date Collected: 06/10/15 13:10

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-28**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25	H	1.0	1.0	%			07/21/15 17:11	1
Percent Solids	75	H	1.0	1.0	%			07/21/15 17:11	1

**Client Sample ID: 2015-MW-17D 2-4**

Date Collected: 06/10/15 13:10

Date Received: 06/11/15 09:22

**Lab Sample ID: 600-113192-28**

Matrix: Solid

Percent Solids: 74.6

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.293	U	3.16	0.293	mg/Kg	☼	07/24/15 08:30	07/24/15 13:47	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.5		6.32	1.38	mg/Kg	☼	07/24/15 08:30	07/24/15 15:54	5
Lead	101		3.16	0.664	mg/Kg	☼	07/24/15 08:30	07/24/15 15:54	5

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the control limits

#### General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-167686/1-A

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 167686

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		07/24/15 08:30	07/24/15 13:30	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/24/15 08:30	07/24/15 13:30	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/24/15 08:30	07/24/15 13:30	1

Lab Sample ID: LCSSRM 600-167686/2-A

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	94.0	65.05		mg/Kg		69.2	1.1 - 213.8
Arsenic	113	108.8		mg/Kg		96.3	78.2 - 122.1
Lead	90.1	87.24		mg/Kg		96.8	81.7 - 118.8

Lab Sample ID: 600-113192-28 MS

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.293	U	64.5	18.07	N1	mg/Kg	☼	28	75 - 125
Arsenic	14.2		64.5	71.87		mg/Kg	☼	90	75 - 125

Lab Sample ID: 600-113192-28 MSD

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.293	U	65.1	22.20	N1	mg/Kg	☼	34	75 - 125	20	20
Arsenic	14.2		65.1	73.80		mg/Kg	☼	92	75 - 125	3	20

Lab Sample ID: 600-113192-28 DU

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.293	U	0.302	U	mg/Kg	☼	NC	20
Arsenic	14.2		13.97		mg/Kg	☼	2	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-113192-28 MS

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	101		64.5	103.9	N1	mg/Kg	☼	4	75 - 125

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

## Method: 6010B - Metals (ICP) - DL (Continued)

Lab Sample ID: 600-113192-28 MSD

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead - DL	101		65.1	171.3	N2	mg/Kg	☼	107	75 - 125	49	20

Lab Sample ID: 600-113192-28 DU

Matrix: Solid

Analysis Batch: 167744

Client Sample ID: 2015-MW-17D 2-4

Prep Type: Total/NA

Prep Batch: 167686

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic - DL	14.5		14.55		mg/Kg	☼	0.2	20
Lead - DL	101		62.90	F	mg/Kg	☼	47	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113192-5 DU

Matrix: Solid

Analysis Batch: 167427

Client Sample ID: 2015-SCC-16B 0.5-2

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	20	H	20		%		2	20
Percent Solids	80	H	80		%		0.5	20

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 600-113192-28

SDG No: \_\_\_\_\_

Lab Name: TestAmerica Houston

Job No: 600-113192-3

Matrix: Solid

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I) C		Serial Dilution Result (S) C		% Difference	Q	Method
Antimony	0.293	U	1.929	J	NC		6010B
Arsenic	14.2		15.75		11	*	6010B
Lead	103		103.9		0.83		6010B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

## Metals

### Prep Batch: 167686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-5 - DL	2015-SCC-16B 0.5-2	Total/NA	Solid	3050B	
600-113192-22 - DL	D-11C 2-4	Total/NA	Solid	3050B	
600-113192-28	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 - DL	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 DU	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 DU - DL	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 MS - DL	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 MS	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 MSD	2015-MW-17D 2-4	Total/NA	Solid	3050B	
600-113192-28 MSD - DL	2015-MW-17D 2-4	Total/NA	Solid	3050B	
LCSSRM 600-167686/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-167686/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 167744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-5 - DL	2015-SCC-16B 0.5-2	Total/NA	Solid	6010B	167686
600-113192-22 - DL	D-11C 2-4	Total/NA	Solid	6010B	167686
600-113192-28	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 - DL	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 DU	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 DU - DL	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 MS	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 MS - DL	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 MSD	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
600-113192-28 MSD - DL	2015-MW-17D 2-4	Total/NA	Solid	6010B	167686
LCSSRM 600-167686/2-A	Lab Control Sample	Total/NA	Solid	6010B	167686
MB 600-167686/1-A	Method Blank	Total/NA	Solid	6010B	167686

## General Chemistry

### Analysis Batch: 167427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113192-5	2015-SCC-16B 0.5-2	Total/NA	Solid	Moisture	
600-113192-5 DU	2015-SCC-16B 0.5-2	Total/NA	Solid	Moisture	
600-113192-22	D-11C 2-4	Total/NA	Solid	Moisture	
600-113192-28	2015-MW-17D 2-4	Total/NA	Solid	Moisture	
600-113192-28 MS	2015-MW-17D 2-4	Total/NA	Solid	Moisture	
600-113192-28 MSD	2015-MW-17D 2-4	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

**Client Sample ID: 2015-SCC-16B 0.5-2**

**Date Collected: 06/10/15 10:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-5**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			167427	07/21/15 17:11	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16B 0.5-2**

**Date Collected: 06/10/15 10:05**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-5**

**Matrix: Solid**

**Percent Solids: 80.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.02 g	50 mL	167686	07/24/15 08:30	DCL	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.02 g	50 mL	167744	07/24/15 15:50	DCL	TAL HOU

**Client Sample ID: D-11C 2-4**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-22**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			167427	07/21/15 17:11	MJB	TAL HOU

**Client Sample ID: D-11C 2-4**

**Date Collected: 06/10/15 13:45**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-22**

**Matrix: Solid**

**Percent Solids: 73.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.04 g	50 mL	167686	07/24/15 08:30	DCL	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.04 g	50 mL	167744	07/24/15 15:52	DCL	TAL HOU

**Client Sample ID: 2015-MW-17D 2-4**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-28**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			167427	07/21/15 17:11	MJB	TAL HOU

**Client Sample ID: 2015-MW-17D 2-4**

**Date Collected: 06/10/15 13:10**

**Date Received: 06/11/15 09:22**

**Lab Sample ID: 600-113192-28**

**Matrix: Solid**

**Percent Solids: 74.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	167686	07/24/15 08:30	DCL	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	167744	07/24/15 13:47	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	167686	07/24/15 08:30	DCL	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	167744	07/24/15 15:54	DCL	TAL HOU

TestAmerica Houston

Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

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# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113192-3

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77240  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record



**TestAmerica**  
7001 E. FM, Suite 200, Houston, TX 77055  
713-690-4444

800-113192 Chain of Custody

COC No 600-56678-12035 1

Page 1 of 4

Job #

<b>Client Information</b>		Sampler	Lab P/N
Client Contact	Phone	Upton, Cathy L	
Anne Faeth-Boyd	(877) 466 3888	E-Mail	cathy.upton@testamerica.com
Company: Golder Associates Inc.		Analysis Requested	
Address:	Due Date Requested:		
820 South Main Street Suite 100			
City:	TAT Requested (days):		
St Charles	10 Days		
State, ZIP:			
MO, 63301			
Phone:	PO #		
836-724-9191	Purchase Order Requested		
Email:	WO #		
afae@gholder.com			
Project Name	Project #		
Exide Recycling Center, Frisco TX	60006523		
Site:	SSON#:		
Exide Recycling Center, Frisco TX			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=ore, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	Moisture - Local Method	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	8260B - (MOD) Target Compound List	6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb	Total Number of Containers	Special Instructions/Note:
2015-SCC-16A	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16A	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16A	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16B	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16B	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16B	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16C	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16C	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16C	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16D	6/13/15	0935	G	Solid	N	N	X					2	Hold
2015-SCC-16D	6/13/15	0935	G	Solid	N	N	X					2	Hold

Possible Hazard Identification		Non-Hazard		Flammable		Skin Irritant		Poison B		Unknown		Radiological	
Deliverable Requested: I, II, III, IV, Other (specify)													
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:							
Relinquished by: JIN GON VIK		Date/Time: 6/10/15		1615		Company: Golder		Received by: [Signature]		Date/Time: 6/11/15		Company: [Signature]	
Relinquished by:		Date/Time:				Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:						Cooler Temperature(s) °C and Other Remarks:					

# TestAmerica Houston

6314 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

# TestAmerica

### Client Information

Client Contact:  
Anne Faeth-Boyd

Sampler: Jiah Song X1  
Phone: (832) 416 3888

Lap PM  
Upton, Cathy L

E-Mail:  
cathy.upton@testamerica.com

Camera Tracking No(s):

Page 2 of 4

### Company

Address:  
820 South Main Street Suite 100

Due Date Requested:

City:  
St. Charles

TAT Requested (days):

State, Zip:  
MO, 63301

10 Days

Phone:  
636-724-9191

PO #:  
Purchase Order Requested

Email:  
afaeth@golder.com

WO #:

Project Name:  
Exide Recycling Center, Frisco TX

Project #:  
60006523

Site:  
Exide Recycling Center, Frisco TX

SSOW#:

### Sample Identification

Sample Date

Sample Time

Sample Type  
(C=comp, G=grab)

Matrix  
(W=water, S=solid, O=other)

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

8260B - Target Compound List

Moisture - Local Method

6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb

8260B - (MOD) Target Compound List

6010B - (MOD) 6010B- As, Cd, Pb, Se, Sb

6010B - Pb

6010B - Sb

6010B - As

Total Number of Containers

Special Instructions/Note:

### Analysis Requested

Preservation Codes:

A - HCL  
B - NaOH  
C - Zn Acetate  
D - Nitric Acid  
E - NaHSO4  
F - MeOH  
G - Ammonia  
H - Ascorbic Acid  
I - Ice  
J - DI Water  
K - EDTA  
L - EDTA  
M - Hexane  
N - None  
O - AsHClO2  
P - Na2OAS  
Q - Na2SO3  
R - Na2S2O3  
S - H2SO4  
T - TSP Dodecylhydrate  
U - Acetone  
V - MCAA  
W - pH 4-5  
Z - other (specify)

Possible Hazard Identification  
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
☐ Return To Client ☐ Disposal By Lab ☐ Archive For \_\_\_\_\_ Months

### Empty Kit Relinquished by:

Date:

Time:

Method of Shipment:

Relinquished by: Jiah Song X1

Date/Time: 6/10/15 1615

Company: Go Key

Received by: [Signature]

Date/Time: 6/11/15 9:00 AM

Company:

Relinquished by:

Date/Time:

Company:

Received by:

Date/Time:

Company:

Custody Seals Intact:

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

# TestAmerica Houston

6310 Rof ... Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5645

## Chain of Custody Record

TestAmerica  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5645

<b>Client Information</b>		Sampler: <u>JNA 5026 X1</u>	Lab PM: <u>Upton, Cathy L</u>	Carrier Tracking No(s):	COC No: <u>600-36678-12035.1</u>
Client Contact: <u>Anna Faeth-Boyd</u>		Phone: <u>(512) 416 3889</u>	E-Mail: <u>cathy.upton@testamericainc.com</u>		Page <u>3</u> of <u>4</u>
Company: <u>Goldier Associates Inc.</u>		Due Date Requested:	Analysis Requested: <u>with MSB</u>		
Address: <u>820 South Main Street Suite 100</u>		TAI Requested (days): <u>10 Days</u>			
City: <u>St. Charles</u>					
State, Zip: <u>MO, 63301</u>					
Phone: <u>636-724-9191</u>		PO #			
Email: <u>afaeth@golder.com</u>		Purchase Order Requested			
Project Name: <u>Exide Recycling Center, Frisco TX</u>		Project #			
Site: <u>Exide Recycling Center, Frisco TX</u>		SSOM#			
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)
<u>Dug-06</u>	<u>6/10/15</u>	<u>-</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-AW-17C</u>	<u>6/10/15</u>	<u>13:5</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17C</u>	<u>6/10/15</u>	<u>13:5</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17C</u>	<u>6/10/15</u>	<u>13:5</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-AW-17D</u>	<u>6/10/15</u>	<u>13:10</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>2015-MW-17D</u>	<u>6/10/15</u>	<u>13:10</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>DUP-05</u>	<u>6/10/15</u>	<u>-</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>ECD-5-A</u>	<u>6/10/15</u>	<u>10:40</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>ECD-5-A</u>	<u>6/10/15</u>	<u>10:40</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>ECD-5-A</u>	<u>6/10/15</u>	<u>10:40</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
<u>E-11C-C</u>	<u>6/10/15</u>	<u>14:40</u>	<u>-</u>	<u>G</u>	<u>Solid</u>
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>3</u> Months			
Deliverable Requested: I, II, III, IV, Other (Specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by		Date:	Time:	Method of Shipment:	
Relinquished by <u>JNA 5026 X1</u>		<u>6/10/15</u>	<u>16:15</u>	Received by <u>[Signature]</u>	
Relinquished by		Date/Time	Company	Date/Time	
Relinquished by		Date/Time	Company	Date/Time	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

# TestAmerica Houston

6373 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

TestAmerica  
1451 Taylor St., Suite 100, Houston, TX 77002

<b>Client Information</b>		Sampler: <u>AKG 7044 X1</u>	Lab Pmt: <u>Upion Cathy L</u>	Carrier Tracking No(s):	COC No: <u>600-36678-12035.1</u>
Client Contact: <u>Anne Fraeth-Boyd</u>	Phone: <u>(632) 416 3888</u>	E-Mail: <u>cathy.upion@testamerica.com</u>			Page: <u>4</u> of <u>4</u>
Company: <u>Goldier Associates Inc.</u>		Due Date Requested:	Analysis Requested		
Address: <u>820 South Main Street Suite 100</u>		TAT Requested (days):	10 Days		
City: <u>St. Charles</u>		State, Zip: <u>MO, 63301</u>	PO #: <u>636-724-9191</u>		
Phone: <u>636-724-9191</u>		Purchase Order Requested	MO #: <u>60006523</u>		
Email: <u>ateeth@golder.com</u>		Project Name: <u>Exide Recycling Center, Frisco TX</u>	SSOW#: <u>Exide Recycling Center, Frisco TX</u>		
Site: <u>Exide Recycling Center, Frisco TX</u>		Field Filtered Sample (Yes or No): <u>Yes</u>			
Sample Identification		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (A=water, S=solid, O=soil, L=leachate, A=air)
E-11C-C	0.5-2	6/10/15	1440	G	Solid
E-11C-C	2-4	6/10/15	1440	G	Solid
E-11C-D	0-0.5	6/10/15	1440	G	Solid
E-11C-D	0.5-2	6/10/15	1440	G	Solid
E-11C-D	2-4	6/10/15	1440	G	Solid
E-11C-B	2-4	6/10/15	1440	G	Solid
E-11C-B	4-6	6/10/15	1440	G	Solid
E-11C-B	6-8	6/10/15	1440	G	Solid
Equipment Blank 1		6/10/15	1600	G	Solid
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>Months</u>			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <u>Jinfang X1</u>		Date/Time: <u>6/10/15 1615</u>	Company: <u>Goldier</u>	Received by: <u>[Signature]</u>	
Relinquished by:		Date/Time:	Company:	Received by:	
Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks	

## Samr Receipt Checklist

Loc: 600  
113192

Date/Time Received:

15 JUN 11 9:22

JOB NUMBER: \_\_\_\_\_

CLIENT:

Golder

UNPACKED BY: \_\_\_\_\_

CARRIER/DRIVER:

FK

Custody Seal Present: ☒ YES ☐ NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
BW	Y / N	Y / N	3.2	600	0	3.2
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YESBase samples are > pH 12: ☐ YES ☐ NO

Acid preserved are &lt; pH 2:

☒ YES☐ NO

pH paper Lot #

HC432654

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

YES NO

COMMENTS:

SAC-SC-0.0.5 not on cor.



**Upton, Cathy**

**From:** Faeth-Boyd, Anne [Anne\_Faeth-Boyd@golder.com]  
**Sent:** Sunday, July 19, 2015 11:42 PM  
**To:** Upton, Cathy  
**Cc:** Thomas, Jim; Higginbotham, Christina  
**Subject:** please run 5 hold samples  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy,

Can we please run the following hold samples:

ECO-11C (0.5-2) – arsenic and lead  
 2015-CUFT-16B (0.5-2) - lead  
 D-11C (2-4) - arsenic  
 2015-MW-17D (2-4) – antimony, arsenic, and lead  
 2015-SCC-16B (0.5-2) – lead

Thanks,  
 Anne

---

**Anne Faeth-Boyd, R.G., P.E.** | Senior Engineer | **Golder Associates Inc.**  
 820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301  
**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
[www.golder.com](http://www.golder.com)

**Work Safe, Home Safe**

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**Please consider the environment before printing this email.**

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113192-3

**Login Number: 113192**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Capps, Dana R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	3.2
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.	False	Received extra samples not listed on COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113214-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/26/2015 2:01:02 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113214-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

6/26/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/26/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?		X			R05D
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/26/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/26/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-1
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R01A	The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Per client request via email, please change the sample IDs as follows: 2015-C2L-01D is actually supposed to be 2015-C2L-C01D and the 0.5-2 is only 0.5-1. See attached email.
R05D	Method 6010B: The method blank for Prep Batch 165417 contained Lead above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.
R07C	Method 6010B: 600-113214-30 MS failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected. Method 6010B: 600-113214-30 MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: 600-113214-5 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected due to the high concentration of lead in the parent sample.
R07D	Method 6010B: 600-113214-30 MSD failed the RPD criteria for the following analyte(s): Lead.
R08C	Method 6010B: 600-113214-30 DU failed the RPD criteria for the following analyte(s): Arsenic. Method 6010B: 600-113214-5 DU failed the RPD criteria for the following analyte(s): Lead, Selenium.
R10B	Method 6010B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: 600-113214-1, 600-113214-5, 600-113214-5 DU, 600-113214-5 MS, 600-113214-5 MSD, 600-113214-8, 600-113214-9, 600-113214-12, 600-113214-15, 600-113214-18, 600-113214-21, 600-113214-24, 600-113214-27, 600-113214-30, 600-113214-30 DU, 600-113214-30 MS, 600-113214-30 MSD, 600-113214-32, 600-113214-33, 600-113214-34, and 600-113214-35. Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B & SW-846 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.330	0.4
Al	Thermo6500	0.300	0.500	0.510	25
As	Thermo6500	0.218	0.500	0.435	1
B	Thermo6500	0.386	0.600	0.585	20
Ba	Thermo6500	0.030	0.030	0.500	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	Thermo6500	0.864	2.500	3.305	100
Cd	Thermo6500	0.026	0.050	0.055	0.25
Co	Thermo6500	0.068	0.100	0.095	0.5
Cr	Thermo6500	0.051	0.100	0.145	0.5
Cu	Thermo6500	0.174	0.500	0.430	0.5
Fe	Thermo6500	2.534	4.000	5.370	20
K	Thermo6500	10.999	12.000	15.950	100
Li	Thermo6500	0.008	0.010	0.120	10
Mg	Thermo6500	1.921	3.000	4.500	100
Mn	Thermo6500	0.038	0.050	0.070	1.5
Mo	Thermo6500	0.136	0.350	0.400	0.5
Na	Thermo6500	0.886	2.400	7.500	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.245	0.5
Sb	Thermo6500	0.232	0.450	0.905	2.5
Se	Thermo6500	0.259	0.500	0.560	2
Si	Thermo6500	0.117	0.270	0.355	10
Sn	Thermo6500	0.087	0.150	0.075	1
Sr	Thermo6500	0.003	0.005	1.020	0.25
Ti	Thermo6500	0.015	0.030	0.050	0.5
Tl	Thermo6500	0.277	0.700	0.660	1.5
V	Thermo6500	0.079	0.150	0.125	0.5
Zn	Thermo6500	0.108	0.200	0.315	1.5

DCS = Detection Check Standard  
 MQL = Method Quantitation Limit



**Matrix:** Water  
**Method:** SW-846 6010B, SW-846 6010C, & EPA 200.7  
**Prep Method:** SW-846 3010A & EPA 200  
**Date Analyzed:** 2/10/2015  
**Job #:** 600-104865  
**TALS Batch:** 155745  
**Units:** mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.001	0.003	0.003	0.01
Al	Thermo6500	0.022	0.050	0.084	0.5
As	Thermo6500	0.003	0.009	0.008	0.01
B	Thermo6500	0.008	0.020	0.030	0.2
Ba	Thermo6500	0.002	0.005	0.009	0.02
Be	Thermo6500	0.001	0.002	0.005	0.005
Ca	Thermo6500	0.022	0.050	0.064	1
Cd	Thermo6500	0.000	0.001	0.001	0.005
Co	Thermo6500	0.001	0.001	0.001	0.01
Cr	Thermo6500	0.002	0.002	0.006	0.01
Cu	Thermo6500	0.001	0.002	0.008	0.01
Fe	Thermo6500	0.087	0.100	0.133	0.4
K	Thermo6500	0.129	0.300	0.172	1
Li	Thermo6500	0.002	0.005	0.011	0.2
Mg	Thermo6500	0.019	0.025	0.085	1
Mn	Thermo6500	0.001	0.002	0.003	0.01
Mo	Thermo6500	0.003	0.005	0.010	0.01
Na	Thermo6500	0.020	0.050	0.048	1
Ni	Thermo6500	0.002	0.005	0.006	0.01
Pb	Thermo6500	0.003	0.005	0.006	0.01
Sb	Thermo6500	0.006	0.010	0.014	0.05
Se	Thermo6500	0.004	0.010	0.013	0.04
Si	Thermo6500	0.008	0.020	0.015	0.2
Sn	Thermo6500	0.003	0.005	0.002	0.01
Sr	Thermo6500	0.000	0.001	0.002	0.005
Ti	Thermo6500	0.001	0.002	0.002	0.01
Tl	Thermo6500	0.008	0.020	0.015	0.03
V	Thermo6500	0.002	0.002	0.005	0.01
Zn	Thermo6500	0.002	0.005	0.005	0.03

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Job ID: 600-113214-1**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-113214-1**

### Comments

No additional comments.

### Receipt

The samples were received on 6/12/2015 9:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.3° C and 0.9° C.

### Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. Per client request via email, please change the sample IDs as follows: 2015-C2L-01D is actually supposed to be 2015-C2L-C01D and the 0.5-2 is only 0.5-1. See attached email.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113214-1	2015-FFTA-08A 0-0.5	Solid	06/11/15 10:35	06/12/15 09:57
600-113214-5	2015-NDA-11 0-0.5	Solid	06/11/15 09:25	06/12/15 09:57
600-113214-8	DUP-07	Solid	06/11/15 00:00	06/12/15 09:57
600-113214-9	2015-NDA-12 0-0.5	Solid	06/11/15 11:10	06/12/15 09:57
600-113214-12	2015-NDA-13 0-0.5	Solid	06/11/15 10:00	06/12/15 09:57
600-113214-15	ECO-11A 0-0.5	Solid	06/11/15 14:10	06/12/15 09:57
600-113214-18	ECO-11B 0-0.5	Solid	06/11/15 14:35	06/12/15 09:57
600-113214-21	ECO-11C 0-0.5	Solid	06/11/15 14:25	06/12/15 09:57
600-113214-24	ECO-11D 0-0.5	Solid	06/11/15 14:50	06/12/15 09:57
600-113214-27	2015-C2L-06D 0-0.5	Solid	06/11/15 11:40	06/12/15 09:57
600-113214-30	2015-C2L-C01D 0-0.5	Solid	06/11/15 15:35	06/12/15 09:57
600-113214-32	DUP-09	Solid	06/11/15 00:00	06/12/15 09:57
600-113214-33	2015-FWCS-5A 0-0.5	Solid	06/11/15 16:35	06/12/15 09:57
600-113214-34	2015-FWCS-6A 0-0.5	Solid	06/11/15 16:30	06/12/15 09:57
600-113214-35	2015-FWCS-7A 0-0.5	Solid	06/11/15 16:25	06/12/15 09:57
600-113214-36	Equipment Blank2 Auger	Water	06/11/15 10:10	06/12/15 09:57
600-113214-37	Equipment Blank2 Probe	Water	06/11/15 10:10	06/12/15 09:57
600-113214-38	Equipment Blank2 Hand Shovel	Water	06/11/15 16:15	06/12/15 09:57

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-FFTA-08A 0-0.5**

Date Collected: 06/11/15 10:35

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	32		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	68		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-FFTA-08A 0-0.5**

Date Collected: 06/11/15 10:35

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-1**

Matrix: Solid

Percent Solids: 67.8

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.5		1.42	0.309	mg/Kg	☼	06/23/15 17:19	06/24/15 15:08	1

## Method: 6010B - Metals (ICP) - DL2

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	342		7.09	1.49	mg/Kg	☼	06/23/15 17:19	06/25/15 14:45	10

**Client Sample ID: 2015-NDA-11 0-0.5**

Date Collected: 06/11/15 09:25

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-5**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	75		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-NDA-11 0-0.5**

Date Collected: 06/11/15 09:25

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-5**

Matrix: Solid

Percent Solids: 75.3

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	4440		6.09	1.28	mg/Kg	☼	06/23/15 17:19	06/25/15 13:08	10

**Client Sample ID: DUP-07**

Date Collected: 06/11/15 00:00

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-8**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	73		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: DUP-07**

Date Collected: 06/11/15 00:00

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-8**

Matrix: Solid

Percent Solids: 72.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1120		6.30	1.32	mg/Kg	☼	06/23/15 17:19	06/25/15 13:24	10

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-NDA-12 0-0.5**

Date Collected: 06/11/15 11:10

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-9**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	76		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-NDA-12 0-0.5**

Date Collected: 06/11/15 11:10

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-9**

Matrix: Solid

Percent Solids: 75.8

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	44.7		3.11	0.654	mg/Kg	☼	06/23/15 17:19	06/25/15 13:26	5

**Client Sample ID: 2015-NDA-13 0-0.5**

Date Collected: 06/11/15 10:00

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-12**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	82		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-NDA-13 0-0.5**

Date Collected: 06/11/15 10:00

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-12**

Matrix: Solid

Percent Solids: 82.1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	350	b	5.97	1.25	mg/Kg	☼	06/24/15 11:42	06/25/15 13:28	10

**Client Sample ID: ECO-11A 0-0.5**

Date Collected: 06/11/15 14:10

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-15**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	73		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: ECO-11A 0-0.5**

Date Collected: 06/11/15 14:10

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-15**

Matrix: Solid

Percent Solids: 73.2

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.6		1.24	0.271	mg/Kg	☼	06/24/15 11:42	06/24/15 16:05	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	158	b	3.10	0.652	mg/Kg	☼	06/24/15 11:42	06/25/15 13:31	5

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: ECO-11B 0-0.5**

**Date Collected: 06/11/15 14:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-18**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	77		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: ECO-11B 0-0.5**

**Date Collected: 06/11/15 14:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-18**

**Matrix: Solid**

**Percent Solids: 77.2**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16.2		1.26	0.274	mg/Kg	☼	06/24/15 11:42	06/24/15 16:08	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	743	b	3.14	0.660	mg/Kg	☼	06/24/15 11:42	06/25/15 13:33	5

**Client Sample ID: ECO-11C 0-0.5**

**Date Collected: 06/11/15 14:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-21**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	78		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: ECO-11C 0-0.5**

**Date Collected: 06/11/15 14:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-21**

**Matrix: Solid**

**Percent Solids: 77.9**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	17.8		1.22	0.266	mg/Kg	☼	06/24/15 11:42	06/24/15 16:10	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	4000	b	3.06	0.642	mg/Kg	☼	06/24/15 11:42	06/25/15 13:36	5

**Client Sample ID: ECO-11D 0-0.5**

**Date Collected: 06/11/15 14:50**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-24**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	81		1.0	1.0	%			06/15/15 17:42	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: ECO-11D 0-0.5**

Date Collected: 06/11/15 14:50

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-24**

Matrix: Solid

Percent Solids: 80.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.9		1.21	0.264	mg/Kg	☼	06/24/15 11:42	06/24/15 16:19	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	554	b	3.03	0.637	mg/Kg	☼	06/24/15 11:42	06/25/15 13:38	5

**Client Sample ID: 2015-C2L-06D 0-0.5**

Date Collected: 06/11/15 11:40

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-27**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	79		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-C2L-06D 0-0.5**

Date Collected: 06/11/15 11:40

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-27**

Matrix: Solid

Percent Solids: 78.8

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	331	b	3.08	0.646	mg/Kg	☼	06/24/15 11:42	06/25/15 13:40	5

**Client Sample ID: 2015-C2L-C01D 0-0.5**

Date Collected: 06/11/15 15:35

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-30**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	78		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-C2L-C01D 0-0.5**

Date Collected: 06/11/15 15:35

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-30**

Matrix: Solid

Percent Solids: 77.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.80		1.23	0.267	mg/Kg	☼	06/24/15 11:42	06/24/15 16:24	1

**Client Sample ID: DUP-09**

Date Collected: 06/11/15 00:00

Date Received: 06/12/15 09:57

**Lab Sample ID: 600-113214-32**

Matrix: Solid

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	80		1.0	1.0	%			06/15/15 17:42	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: DUP-09**

**Date Collected: 06/11/15 00:00**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-32**

**Matrix: Solid**

**Percent Solids: 79.8**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.2		1.23	0.268	mg/Kg	☼	06/24/15 11:42	06/24/15 16:34	1

**Client Sample ID: 2015-FWCS-5A 0-0.5**

**Date Collected: 06/11/15 16:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-33**

**Matrix: Solid**

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	83		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-FWCS-5A 0-0.5**

**Date Collected: 06/11/15 16:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-33**

**Matrix: Solid**

**Percent Solids: 82.7**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.90	J	2.82	0.262	mg/Kg	☼	06/24/15 11:42	06/24/15 16:36	1
Arsenic	13.1		1.13	0.246	mg/Kg	☼	06/24/15 11:42	06/24/15 16:36	1
Cadmium	4.07		0.282	0.0289	mg/Kg	☼	06/24/15 11:42	06/24/15 16:36	1
Selenium	0.796	J	2.26	0.293	mg/Kg	☼	06/24/15 11:42	06/24/15 16:36	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1040	b	5.65	1.19	mg/Kg	☼	06/24/15 11:42	06/25/15 13:45	10

**Client Sample ID: 2015-FWCS-6A 0-0.5**

**Date Collected: 06/11/15 16:30**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-34**

**Matrix: Solid**

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	83		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-FWCS-6A 0-0.5**

**Date Collected: 06/11/15 16:30**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-34**

**Matrix: Solid**

**Percent Solids: 82.6**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.07	J	2.97	0.275	mg/Kg	☼	06/24/15 11:42	06/24/15 16:39	1
Arsenic	12.2		1.19	0.259	mg/Kg	☼	06/24/15 11:42	06/24/15 16:39	1
Cadmium	2.67		0.297	0.0304	mg/Kg	☼	06/24/15 11:42	06/24/15 16:39	1
Selenium	0.307	U	2.37	0.307	mg/Kg	☼	06/24/15 11:42	06/24/15 16:39	1

**Method: 6010B - Metals (ICP) - DL**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	570	b	2.97	0.623	mg/Kg	☼	06/24/15 11:42	06/25/15 13:54	5

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-FWCS-7A 0-0.5**

**Lab Sample ID: 600-113214-35**

Date Collected: 06/11/15 16:25

Matrix: Solid

Date Received: 06/12/15 09:57

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			06/15/15 17:42	1
Percent Solids	79		1.0	1.0	%			06/15/15 17:42	1

**Client Sample ID: 2015-FWCS-7A 0-0.5**

**Lab Sample ID: 600-113214-35**

Date Collected: 06/11/15 16:25

Matrix: Solid

Date Received: 06/12/15 09:57

Percent Solids: 79.1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.09		3.07	0.285	mg/Kg	☼	06/24/15 11:42	06/24/15 16:41	1
Arsenic	17.1		1.23	0.268	mg/Kg	☼	06/24/15 11:42	06/24/15 16:41	1
Cadmium	9.62		0.307	0.0314	mg/Kg	☼	06/24/15 11:42	06/24/15 16:41	1
Selenium	1.34	J	2.45	0.318	mg/Kg	☼	06/24/15 11:42	06/24/15 16:41	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1730	b	3.07	0.644	mg/Kg	☼	06/24/15 11:42	06/25/15 13:56	5

**Client Sample ID: Equipment Blank2 Auger**

**Lab Sample ID: 600-113214-36**

Date Collected: 06/11/15 10:10

Matrix: Water

Date Received: 06/12/15 09:57

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		06/22/15 13:30	06/23/15 14:30	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		06/22/15 13:30	06/23/15 14:30	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		06/22/15 13:30	06/23/15 14:30	1
Lead	0.0344		0.0100	0.00290	mg/L		06/22/15 13:30	06/23/15 14:30	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		06/22/15 13:30	06/23/15 14:30	1

**Client Sample ID: Equipment Blank2 Probe**

**Lab Sample ID: 600-113214-37**

Date Collected: 06/11/15 10:10

Matrix: Water

Date Received: 06/12/15 09:57

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		06/22/15 13:30	06/23/15 14:32	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		06/22/15 13:30	06/23/15 14:32	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		06/22/15 13:30	06/23/15 14:32	1
Lead	0.00290	U	0.0100	0.00290	mg/L		06/22/15 13:30	06/23/15 14:32	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		06/22/15 13:30	06/23/15 14:32	1

**Client Sample ID: Equipment Blank2 Hand Shovel**

**Lab Sample ID: 600-113214-38**

Date Collected: 06/11/15 16:15

Matrix: Water

Date Received: 06/12/15 09:57

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		06/22/15 13:30	06/23/15 14:39	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		06/22/15 13:30	06/23/15 14:39	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		06/22/15 13:30	06/23/15 14:39	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: Equipment Blank2 Hand Shovel**

**Lab Sample ID: 600-113214-38**

**Date Collected: 06/11/15 16:15**

**Matrix: Water**

**Date Received: 06/12/15 09:57**

**Method: 6010B - Metals (ICP) (Continued)**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00290	U	0.0100	0.00290	mg/L		06/22/15 13:30	06/23/15 14:39	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		06/22/15 13:30	06/23/15 14:39	1

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
b	The compound was found in the blank and sample
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD 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.

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-165216/1-A

Matrix: Water

Analysis Batch: 165321

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 165216

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L	-	06/22/15 13:30	06/23/15 13:26	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L	-	06/22/15 13:30	06/23/15 13:26	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L	-	06/22/15 13:30	06/23/15 13:26	1
Lead	0.00290	U	0.0100	0.00290	mg/L	-	06/22/15 13:30	06/23/15 13:26	1
Selenium	0.00417	U	0.0400	0.00417	mg/L	-	06/22/15 13:30	06/23/15 13:26	1

Lab Sample ID: LCS 600-165216/2-A

Matrix: Water

Analysis Batch: 165321

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 165216

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	1.056		mg/L	-	106	80 - 120
Arsenic	1.00	1.057		mg/L	-	106	80 - 120
Cadmium	0.500	0.5331		mg/L	-	107	80 - 120
Lead	1.00	1.074		mg/L	-	107	80 - 120
Selenium	1.00	1.056		mg/L	-	106	80 - 120

Lab Sample ID: 600-113112-D-7-G MS

Matrix: Water

Analysis Batch: 165321

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 165216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.00630	U	1.00	0.9055		mg/L	-	91	75 - 125
Arsenic	0.0386		1.00	1.168		mg/L	-	113	75 - 125
Cadmium	0.000652	J	0.500	0.4836		mg/L	-	97	75 - 125
Lead	0.00290	U	1.00	0.9427		mg/L	-	94	75 - 125
Selenium	0.00417	U	1.00	1.085		mg/L	-	109	75 - 125

Lab Sample ID: 600-113112-D-7-H MSD

Matrix: Water

Analysis Batch: 165321

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 165216

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.00630	U	1.00	0.9285		mg/L	-	93	75 - 125	3	20
Arsenic	0.0386		1.00	1.202		mg/L	-	116	75 - 125	3	20
Cadmium	0.000652	J	0.500	0.4928		mg/L	-	98	75 - 125	2	20
Lead	0.00290	U	1.00	0.9649		mg/L	-	96	75 - 125	2	20
Selenium	0.00417	U	1.00	1.109		mg/L	-	111	75 - 125	2	20

Lab Sample ID: 600-113112-D-7-F DU

Matrix: Water

Analysis Batch: 165321

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 165216

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.00630	U	0.00630	U	mg/L	-	NC	20
Arsenic	0.0386		0.03989		mg/L	-	3	20
Cadmium	0.000652	J	0.0005610	J	mg/L	-	15	20
Lead	0.00290	U	0.00290	U	mg/L	-	NC	20
Selenium	0.00417	U	0.00417	U	mg/L	-	NC	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

Lab Sample ID: MB 600-165357/1-A  
Matrix: Solid  
Analysis Batch: 165419

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/23/15 17:19	06/24/15 14:09	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/23/15 17:19	06/24/15 14:09	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/23/15 17:19	06/24/15 14:09	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/23/15 17:19	06/24/15 14:09	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/23/15 17:19	06/24/15 14:09	1

Lab Sample ID: LCSSRM 600-165357/2-A  
Matrix: Solid  
Analysis Batch: 165419

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	108	87.37		mg/Kg		80.9	0.9 - 214.8
Arsenic	151	152.1		mg/Kg		100.7	80.8 - 119.9
Cadmium	152	148.7		mg/Kg		97.8	81.6 - 117.8
Lead	254	255.1		mg/Kg		100.4	81.5 - 120.9
Selenium	162	162.6		mg/Kg		100.4	77.2 - 122.2

Lab Sample ID: 600-113214-5 MS  
Matrix: Solid  
Analysis Batch: 165419

Client Sample ID: 2015-NDA-11 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	17.5		63.8	50.85	N1	mg/Kg	☼	52	75 - 125
Arsenic	23.0		63.8	92.36		mg/Kg	☼	109	75 - 125
Cadmium	24.4		31.9	56.01		mg/Kg	☼	99	75 - 125
Selenium	1.83	J	63.8	66.32		mg/Kg	☼	101	75 - 125

Lab Sample ID: 600-113214-5 MSD  
Matrix: Solid  
Analysis Batch: 165419

Client Sample ID: 2015-NDA-11 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	17.5		61.5	53.26	N1	mg/Kg	☼	58	75 - 125	5	20
Arsenic	23.0		61.5	89.98		mg/Kg	☼	109	75 - 125	3	20
Cadmium	24.4		30.7	56.81		mg/Kg	☼	105	75 - 125	1	20
Selenium	1.83	J	61.5	64.84		mg/Kg	☼	103	75 - 125	2	20

Lab Sample ID: 600-113214-5 DU  
Matrix: Solid  
Analysis Batch: 165419

Client Sample ID: 2015-NDA-11 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	17.5		16.01		mg/Kg	☼	9	20
Arsenic	23.0		19.54		mg/Kg	☼	16	20
Cadmium	24.4		20.20		mg/Kg	☼	19	20
Selenium	1.83	J	1.212	J	mg/Kg	☼	41	20

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

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

Lab Sample ID: MB 600-165417/1-A

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 165417

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/24/15 11:42	06/24/15 15:58	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/24/15 11:42	06/24/15 15:58	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/24/15 11:42	06/24/15 15:58	1
Lead	5.175		0.500	0.105	mg/Kg		06/24/15 11:42	06/24/15 15:58	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/24/15 11:42	06/24/15 15:58	1

Lab Sample ID: LCSSRM 600-165417/2-A

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 165417

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	108	87.13		mg/Kg		80.7	0.9 - 214.8
Arsenic	151	153.9		mg/Kg		101.9	80.8 - 119.9
Cadmium	152	151.2		mg/Kg		99.5	81.6 - 117.8
Lead	254	264.4		mg/Kg		104.1	81.5 - 120.9
Selenium	162	162.8		mg/Kg		100.5	77.2 - 122.2

Lab Sample ID: 600-113214-30 MS

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: 2015-C2L-C01D 0-0.5

Prep Type: Total/NA

Prep Batch: 165417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.285	U	62.5	23.52	N1	mg/Kg	☼	38	75 - 125
Arsenic	7.80		62.5	70.09		mg/Kg	☼	100	75 - 125
Cadmium	0.350		31.3	30.02		mg/Kg	☼	95	75 - 125
Selenium	0.318	U	62.5	56.10		mg/Kg	☼	90	75 - 125

Lab Sample ID: 600-113214-30 MSD

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: 2015-C2L-C01D 0-0.5

Prep Type: Total/NA

Prep Batch: 165417

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.285	U	63.8	25.75	N1	mg/Kg	☼	40	75 - 125	9	20
Arsenic	7.80		63.8	79.77		mg/Kg	☼	113	75 - 125	13	20
Cadmium	0.350		31.9	31.56		mg/Kg	☼	98	75 - 125	5	20
Selenium	0.318	U	63.8	59.47		mg/Kg	☼	93	75 - 125	6	20

Lab Sample ID: 600-113214-30 DU

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: 2015-C2L-C01D 0-0.5

Prep Type: Total/NA

Prep Batch: 165417

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.285	U	0.279	U	mg/Kg	☼	NC	20
Arsenic	7.80		12.04	F	mg/Kg	☼	43	20
Cadmium	0.350		0.3070		mg/Kg	☼	13	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

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

Lab Sample ID: 600-113214-30 DU

Matrix: Solid

Analysis Batch: 165419

Client Sample ID: 2015-C2L-C01D 0-0.5

Prep Type: Total/NA

Prep Batch: 165417

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Selenium	0.318	U	0.312	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-165524/1-A

Matrix: Solid

Analysis Batch: 165519

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 165524

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		06/25/15 12:13	06/25/15 15:49	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		06/25/15 12:13	06/25/15 15:49	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		06/25/15 12:13	06/25/15 15:49	1
Lead	0.105	U	0.500	0.105	mg/Kg		06/25/15 12:13	06/25/15 15:49	1
Selenium	0.259	U	2.00	0.259	mg/Kg		06/25/15 12:13	06/25/15 15:49	1

Lab Sample ID: LCSSRM 600-165524/2-A

Matrix: Solid

Analysis Batch: 165519

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 165524

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	108	76.98		mg/Kg		71.3	0.9 - 214.8
Arsenic	151	155.1		mg/Kg		102.7	80.8 - 119.9
Cadmium	152	153.7		mg/Kg		101.1	81.6 - 117.8
Lead	254	264.2		mg/Kg		104.0	81.5 - 120.9
Selenium	162	165.8		mg/Kg		102.3	77.2 - 122.2

Lab Sample ID: 600-113214-30 DU

Matrix: Solid

Analysis Batch: 165519

Client Sample ID: 2015-C2L-C01D 0-0.5

Prep Type: Total/NA

Prep Batch: 165524

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	1.02	J	0.277	U	mg/Kg	☼	NC	20
Arsenic	11.6		12.68		mg/Kg	☼	9	20
Cadmium	0.365		0.3459		mg/Kg	☼	5	20
Selenium	0.464	J	0.309	U	mg/Kg	☼	NC	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-113214-5 MS

Matrix: Solid

Analysis Batch: 165519

Client Sample ID: 2015-NDA-11 0-0.5

Prep Type: Total/NA

Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead - DL	4440		63.8	5013	4	mg/Kg	☼	905	75 - 125

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Method: 6010B - Metals (ICP) - DL (Continued)

Lab Sample ID: 600-113214-5 MSD  
Matrix: Solid  
Analysis Batch: 165519

Client Sample ID: 2015-NDA-11 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead - DL	4440		61.5	4927	4	mg/Kg	☼	800	75 - 125	2	20

Lab Sample ID: 600-113214-5 DU  
Matrix: Solid  
Analysis Batch: 165519

Client Sample ID: 2015-NDA-11 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165357

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lead - DL	4440		3596	F	mg/Kg	☼	21	20

Lab Sample ID: 600-113214-30 MS  
Matrix: Solid  
Analysis Batch: 165519

Client Sample ID: 2015-C2L-C01D 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165524

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead - DL	46.2		59.1	204.4	N1	mg/Kg	☼	268	75 - 125		

Lab Sample ID: 600-113214-30 MSD  
Matrix: Solid  
Analysis Batch: 165519

Client Sample ID: 2015-C2L-C01D 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165524

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead - DL	46.2		59.6	119.7	N2	mg/Kg	☼	123	75 - 125	52	20

Lab Sample ID: 600-113214-30 DU  
Matrix: Solid  
Analysis Batch: 165519

Client Sample ID: 2015-C2L-C01D 0-0.5  
Prep Type: Total/NA  
Prep Batch: 165524

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lead - DL	46.2		44.07		mg/Kg	☼	5	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113214-34 DU  
Matrix: Solid  
Analysis Batch: 164679

Client Sample ID: 2015-FWCS-6A 0-0.5  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	17		18		%		3	20
Percent Solids	83		82		%		0.7	20

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Antimony	0.0500	0.00630	mg/L	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Arsenic	0.0100	0.00328	mg/L	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Cadmium	0.00500	0.000350	mg/L	6010B
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B
Selenium	2.00	0.259	mg/Kg	6010B
Selenium	0.0400	0.00417	mg/L	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Metals

### Prep Batch: 165216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113112-D-7-F DU	Duplicate	Total/NA	Water	3010A	
600-113112-D-7-G MS	Matrix Spike	Total/NA	Water	3010A	
600-113112-D-7-H MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
600-113214-36	Equipment Blank2 Auger	Total/NA	Water	3010A	
600-113214-37	Equipment Blank2 Probe	Total/NA	Water	3010A	
600-113214-38	Equipment Blank2 Hand Shovel	Total/NA	Water	3010A	
LCS 600-165216/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-165216/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 165321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113112-D-7-F DU	Duplicate	Total/NA	Water	6010B	165216
600-113112-D-7-G MS	Matrix Spike	Total/NA	Water	6010B	165216
600-113112-D-7-H MSD	Matrix Spike Duplicate	Total/NA	Water	6010B	165216
600-113214-36	Equipment Blank2 Auger	Total/NA	Water	6010B	165216
600-113214-37	Equipment Blank2 Probe	Total/NA	Water	6010B	165216
600-113214-38	Equipment Blank2 Hand Shovel	Total/NA	Water	6010B	165216
LCS 600-165216/2-A	Lab Control Sample	Total/NA	Water	6010B	165216
MB 600-165216/1-A	Method Blank	Total/NA	Water	6010B	165216

### Prep Batch: 165357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-1 - DL2	2015-FFTA-08A 0-0.5	Total/NA	Solid	3050B	
600-113214-1	2015-FFTA-08A 0-0.5	Total/NA	Solid	3050B	
600-113214-5 - DL	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 DU	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 DU - DL	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 MS	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 MS - DL	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 MSD - DL	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-5 MSD	2015-NDA-11 0-0.5	Total/NA	Solid	3050B	
600-113214-8 - DL	DUP-07	Total/NA	Solid	3050B	
600-113214-9 - DL	2015-NDA-12 0-0.5	Total/NA	Solid	3050B	
LCSSRM 600-165357/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165357/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 165417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-12 - DL	2015-NDA-13 0-0.5	Total/NA	Solid	3050B	
600-113214-15 - DL	ECO-11A 0-0.5	Total/NA	Solid	3050B	
600-113214-15	ECO-11A 0-0.5	Total/NA	Solid	3050B	
600-113214-18	ECO-11B 0-0.5	Total/NA	Solid	3050B	
600-113214-18 - DL	ECO-11B 0-0.5	Total/NA	Solid	3050B	
600-113214-21	ECO-11C 0-0.5	Total/NA	Solid	3050B	
600-113214-21 - DL	ECO-11C 0-0.5	Total/NA	Solid	3050B	
600-113214-24	ECO-11D 0-0.5	Total/NA	Solid	3050B	
600-113214-24 - DL	ECO-11D 0-0.5	Total/NA	Solid	3050B	
600-113214-27 - DL	2015-C2L-06D 0-0.5	Total/NA	Solid	3050B	
600-113214-30	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-30 DU	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-30 MS	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Metals (Continued)

### Prep Batch: 165417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-30 MSD	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-32	DUP-09	Total/NA	Solid	3050B	
600-113214-33	2015-FWCS-5A 0-0.5	Total/NA	Solid	3050B	
600-113214-33 - DL	2015-FWCS-5A 0-0.5	Total/NA	Solid	3050B	
600-113214-34	2015-FWCS-6A 0-0.5	Total/NA	Solid	3050B	
600-113214-34 - DL	2015-FWCS-6A 0-0.5	Total/NA	Solid	3050B	
600-113214-35 - DL	2015-FWCS-7A 0-0.5	Total/NA	Solid	3050B	
600-113214-35	2015-FWCS-7A 0-0.5	Total/NA	Solid	3050B	
LCSSRM 600-165417/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165417/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 165419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-1	2015-FFTA-08A 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 DU	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 MS	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 MSD	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-15	ECO-11A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-18	ECO-11B 0-0.5	Total/NA	Solid	6010B	165417
600-113214-21	ECO-11C 0-0.5	Total/NA	Solid	6010B	165417
600-113214-24	ECO-11D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-30	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-30 DU	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-30 MS	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-30 MSD	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-32	DUP-09	Total/NA	Solid	6010B	165417
600-113214-33	2015-FWCS-5A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-34	2015-FWCS-6A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-35	2015-FWCS-7A 0-0.5	Total/NA	Solid	6010B	165417
LCSSRM 600-165357/2-A	Lab Control Sample	Total/NA	Solid	6010B	165357
LCSSRM 600-165417/2-A	Lab Control Sample	Total/NA	Solid	6010B	165417
MB 600-165357/1-A	Method Blank	Total/NA	Solid	6010B	165357
MB 600-165417/1-A	Method Blank	Total/NA	Solid	6010B	165417

### Analysis Batch: 165519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-1 - DL2	2015-FFTA-08A 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 - DL	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 DU - DL	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 MS - DL	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-5 MSD - DL	2015-NDA-11 0-0.5	Total/NA	Solid	6010B	165357
600-113214-8 - DL	DUP-07	Total/NA	Solid	6010B	165357
600-113214-9 - DL	2015-NDA-12 0-0.5	Total/NA	Solid	6010B	165357
600-113214-12 - DL	2015-NDA-13 0-0.5	Total/NA	Solid	6010B	165417
600-113214-15 - DL	ECO-11A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-18 - DL	ECO-11B 0-0.5	Total/NA	Solid	6010B	165417
600-113214-21 - DL	ECO-11C 0-0.5	Total/NA	Solid	6010B	165417
600-113214-24 - DL	ECO-11D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-27 - DL	2015-C2L-06D 0-0.5	Total/NA	Solid	6010B	165417
600-113214-30 DU	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165524
600-113214-30 DU - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165524

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Metals (Continued)

### Analysis Batch: 165519 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-30 MS - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165524
600-113214-30 MSD - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	6010B	165524
600-113214-33 - DL	2015-FWCS-5A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-34 - DL	2015-FWCS-6A 0-0.5	Total/NA	Solid	6010B	165417
600-113214-35 - DL	2015-FWCS-7A 0-0.5	Total/NA	Solid	6010B	165417
LCSSRM 600-165524/2-A	Lab Control Sample	Total/NA	Solid	6010B	165524
MB 600-165524/1-A	Method Blank	Total/NA	Solid	6010B	165524

### Prep Batch: 165524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-30 DU - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-30 DU	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-30 MS - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
600-113214-30 MSD - DL	2015-C2L-C01D 0-0.5	Total/NA	Solid	3050B	
LCSSRM 600-165524/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-165524/1-A	Method Blank	Total/NA	Solid	3050B	

## General Chemistry

### Analysis Batch: 164679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-1	2015-FFTA-08A 0-0.5	Total/NA	Solid	Moisture	
600-113214-5	2015-NDA-11 0-0.5	Total/NA	Solid	Moisture	
600-113214-5 MS	2015-NDA-11 0-0.5	Total/NA	Solid	Moisture	
600-113214-5 MSD	2015-NDA-11 0-0.5	Total/NA	Solid	Moisture	
600-113214-8	DUP-07	Total/NA	Solid	Moisture	
600-113214-9	2015-NDA-12 0-0.5	Total/NA	Solid	Moisture	
600-113214-12	2015-NDA-13 0-0.5	Total/NA	Solid	Moisture	
600-113214-15	ECO-11A 0-0.5	Total/NA	Solid	Moisture	
600-113214-18	ECO-11B 0-0.5	Total/NA	Solid	Moisture	
600-113214-21	ECO-11C 0-0.5	Total/NA	Solid	Moisture	
600-113214-24	ECO-11D 0-0.5	Total/NA	Solid	Moisture	
600-113214-27	2015-C2L-06D 0-0.5	Total/NA	Solid	Moisture	
600-113214-30	2015-C2L-C01D 0-0.5	Total/NA	Solid	Moisture	
600-113214-30 MS	2015-C2L-C01D 0-0.5	Total/NA	Solid	Moisture	
600-113214-30 MSD	2015-C2L-C01D 0-0.5	Total/NA	Solid	Moisture	
600-113214-32	DUP-09	Total/NA	Solid	Moisture	
600-113214-33	2015-FWCS-5A 0-0.5	Total/NA	Solid	Moisture	
600-113214-34	2015-FWCS-6A 0-0.5	Total/NA	Solid	Moisture	
600-113214-34 DU	2015-FWCS-6A 0-0.5	Total/NA	Solid	Moisture	
600-113214-35	2015-FWCS-7A 0-0.5	Total/NA	Solid	Moisture	

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-FFTA-08A 0-0.5**

**Date Collected: 06/11/15 10:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-1**

**Matrix: Solid**

**Percent Solids: 67.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	165357	06/23/15 17:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	165419	06/24/15 15:08	DCL	TAL HOU
Total/NA	Prep	3050B	DL2		1.04 g	50 mL	165357	06/23/15 17:19	NER	TAL HOU
Total/NA	Analysis	6010B	DL2	10	1.04 g	50 mL	165519	06/25/15 14:45	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-NDA-11 0-0.5**

**Date Collected: 06/11/15 09:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-5**

**Matrix: Solid**

**Percent Solids: 75.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.09 g	50 mL	165357	06/23/15 17:19	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.09 g	50 mL	165519	06/25/15 13:08	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: DUP-07**

**Date Collected: 06/11/15 00:00**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-8**

**Matrix: Solid**

**Percent Solids: 72.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.09 g	50 mL	165357	06/23/15 17:19	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.09 g	50 mL	165519	06/25/15 13:24	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-NDA-12 0-0.5**

**Date Collected: 06/11/15 11:10**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-9**

**Matrix: Solid**

**Percent Solids: 75.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	165357	06/23/15 17:19	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	165519	06/25/15 13:26	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-NDA-13 0-0.5**

**Date Collected: 06/11/15 10:00**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-12**

**Matrix: Solid**

**Percent Solids: 82.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.02 g	50 mL	165519	06/25/15 13:28	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: ECO-11A 0-0.5**

**Date Collected: 06/11/15 14:10**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-15**

**Matrix: Solid**

**Percent Solids: 73.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.10 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.10 g	50 mL	165419	06/24/15 16:05	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.10 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.10 g	50 mL	165519	06/25/15 13:31	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: ECO-11B 0-0.5**

**Date Collected: 06/11/15 14:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-18**

**Matrix: Solid**

**Percent Solids: 77.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	165419	06/24/15 16:08	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.03 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	165519	06/25/15 13:33	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: ECO-11C 0-0.5**

**Date Collected: 06/11/15 14:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-21**

**Matrix: Solid**

**Percent Solids: 77.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	165419	06/24/15 16:10	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.05 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	165519	06/25/15 13:36	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: ECO-11D 0-0.5**

**Date Collected: 06/11/15 14:50**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-24**

**Matrix: Solid**

**Percent Solids: 80.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	165419	06/24/15 16:19	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.02 g	50 mL	165519	06/25/15 13:38	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-C2L-06D 0-0.5**

**Date Collected: 06/11/15 11:40**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-27**

**Matrix: Solid**

**Percent Solids: 78.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.03 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	165519	06/25/15 13:40	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-C2L-C01D 0-0.5**

**Date Collected: 06/11/15 15:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-30**

**Matrix: Solid**

**Percent Solids: 77.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	165419	06/24/15 16:24	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: DUP-09**

**Date Collected: 06/11/15 00:00**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-32**

**Matrix: Solid**

**Percent Solids: 79.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	165419	06/24/15 16:34	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-FWCS-5A 0-0.5**

**Date Collected: 06/11/15 16:35**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-33**

**Matrix: Solid**

**Percent Solids: 82.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	165419	06/24/15 16:36	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.07 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.07 g	50 mL	165519	06/25/15 13:45	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-FWCS-6A 0-0.5**

**Date Collected: 06/11/15 16:30**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-34**

**Matrix: Solid**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	165419	06/24/15 16:39	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.02 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.02 g	50 mL	165519	06/25/15 13:54	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

**Client Sample ID: 2015-FWCS-6A 0-0.5**

**Lab Sample ID: 600-113214-34**

**Date Collected: 06/11/15 16:30**

**Matrix: Solid**

**Date Received: 06/12/15 09:57**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: 2015-FWCS-7A 0-0.5**

**Lab Sample ID: 600-113214-35**

**Date Collected: 06/11/15 16:25**

**Matrix: Solid**

**Date Received: 06/12/15 09:57**

**Percent Solids: 79.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	165419	06/24/15 16:41	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.03 g	50 mL	165417	06/24/15 11:42	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	165519	06/25/15 13:56	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			164679	06/15/15 17:42	MJB	TAL HOU

**Client Sample ID: Equipment Blank2 Auger**

**Lab Sample ID: 600-113214-36**

**Date Collected: 06/11/15 10:10**

**Matrix: Water**

**Date Received: 06/12/15 09:57**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	165216	06/22/15 13:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	165321	06/23/15 14:30	DCL	TAL HOU

**Client Sample ID: Equipment Blank2 Probe**

**Lab Sample ID: 600-113214-37**

**Date Collected: 06/11/15 10:10**

**Matrix: Water**

**Date Received: 06/12/15 09:57**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	165216	06/22/15 13:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	165321	06/23/15 14:32	DCL	TAL HOU

**Client Sample ID: Equipment Blank2 Hand Shovel**

**Lab Sample ID: 600-113214-38**

**Date Collected: 06/11/15 16:15**

**Matrix: Water**

**Date Received: 06/12/15 09:57**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	165216	06/22/15 13:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	165321	06/23/15 14:39	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

TestAmerica Houston

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

## Chain of Custody Record



# TestAmerica

[illegible]

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golden Associates Inc. Address: 820 South Main Street Suite 100 City: St Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: arfaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site: Exide Recycling Center, Frisco TX				Lab PM: Cathy L Upton Phone: (822) 416 3888 E-Mail: cathy.upton@testarise.com										
<b>Analysis Requested</b> Due Date Requested: 10 Days TAT Requested (days): PO #: Purchase Order Requested WO #: Project # 60006523 SSOW#:				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amshlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:										
Sample Identification			Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=other, T=tissue, A=air)		Total Number of Containers		Special Instructions/Note:	
2015-FFTA-08A 0-0.5			6/11/15		1035		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold; MS/MSD included	
2015-FFTA-08A 0.5-2			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-FFTA-08A 2-4			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
Dup-08			6/11/15		-		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-NDA-11 0-0.5			6/11/15		0935		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		MS/MSD included	
2015-NDA-11 0.5-2			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-NDA-11 2-4			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
Dup-07			6/11/15		-		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-NDA-12 0-0.5			6/11/15		1110		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-NDA-12 0.5-2			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
2015-NDA-12 2-4			↓		↓		G		Solid		6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb		Hold	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)														
<b>Sample Disposal</b> (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months														
<b>Special Instructions/QC Requirements:</b>														
<b>Empty Kit Relinquished by</b> Relinquished by: JAG 5/6/15 Relinquished by: Relinquished by: Relinquished by:														
<b>Method of Shipment:</b> Date/Time: 6/11/15 1810 Received by: Golder Date/Time: Received by: Date/Time: Received by: Date/Time: Cooler Temperature(s) °C and Other Remarks:														







## Chain of Custody Record

TestAmerica

"We are committed to providing the highest quality service to our customers."

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street, Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site: Exide Recycling Center, Frisco TX		Lab PM: Epton, Cathy L. E-Mail: cathy.upton@testamericainc.com Phone: (832) 416 3888 Sample ID: JAG SAG X1		Carrier Tracking No(s): 600-36678-12035.1 Page: 3 of 4 Job #:	
Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #: 80006523 Project #: 80006523 SOW#:		Analysis Requested In Accordance w/MSA			
Sample Identification Sample ID: ELO-11C 2-4 ELO-11D 0-0.5 ELO-11D 0.5-2 ELO-11D 2-4 2015-C2L-06D 0.5-2 2015-C2L-06D 2-4 2015-C2L-01D 0-0.5 2015-C2L-01D 0.5-2 Dup-09 2015-FACS -SA 0-0.5		Sample Date 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15		Sample Time 1425 1450 1 1 1 1 1 1 1	
Matrix (W=Water, S=Solid, O=Organic, G=Grab) Solid Solid Solid Solid Solid Solid Solid Solid Solid		Preservation Code: G G G G G G G G G		Field Filtered Sample (Yes or No) N N N N N N N N N	
Moisture - Local Method N N N N N N N N N		Moisture - Target Compound List N N N N N N N N N		6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb	
Total Number of Containers X X X X X X X X X		Special Instructions/Note: Held Held Held Held Held Held Held Held MS/MSD (included) Held		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: JAG SAG X1		Date/Time: 6/11/15 1810		Date/Time: 6/15/15 957	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact Δ Yes Δ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks:	

## Chain of Custody Record

[illegible]

TestAmerica Houston

Loc: 600  
113214TestAmerica  
15 JUL 2015 8:57  
THE LEADER IN ENVIRONMENTAL TESTING

Sample

checklist

Date/Time Received:

JOB NUMBER:

CLIENT:

Golder

UNPACKED BY:

CARRIER/DRIVER:

FE

Custody Seal Present:

☐ YES☒ NO

Number of Coolers Received:

2

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
RW	Y / N	Y / N	0.3	680	0	0.3
RW	Y / N	Y / N	0.9	1	1	0.9
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice?

☒ YES☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YES

Base samples are &gt; pH 12:

☐ YES☐ NO

Acid preserved are &lt; pH 2:

☒ YES☐ NO

pH paper Lot #

HCS47770

VOA headspace acceptable (5-6mm):

☐ YES☐ NO☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

**Upton, Cathy**

**From:** Marlow, Abby [Abby\_Marlow@golder.com]  
**Sent:** Tuesday, June 16, 2015 6:14 PM  
**To:** Upton, Cathy  
**Subject:** RE: TestAmerica Sample Login Confirmation files from 600-113214 Exide Recycling Center, Frisco TX  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Hey Cathy,

We have one issue and it was a COC issue. 2015-C2L-01D is actually supposed to be 2015-C2L-C01D and the 0.5-2 is only 0.5-1. Can you please correct this and sorry for the issue.

Thank you

**Abby Marlow** | Staff Environmental Scientist | **Golder Associates Inc.**

500 Century Plaza Drive, Suite 190, Houston, Texas, USA 77073

**T:** +1 (281) 821-6868 | **D:** +1 (281) 821 6833 | **F:** +1 (281) 821-6870 | **E:** [Abby\\_Marlow@golder.com](mailto:Abby_Marlow@golder.com) | [www.golder.com](http://www.golder.com)

**Work Safe, Home Safe**

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**Please consider the environment before printing this email.**

**From:** Upton, Cathy [mailto:cathy.upton@testamericainc.com]  
**Sent:** Monday, June 15, 2015 8:52 AM  
**To:** Faeth-Boyd, Anne; Marlow, Abby; Forthaus, Brett; Higginbotham, Christina; Thomas, Jim  
**Subject:** TestAmerica Sample Login Confirmation files from 600-113214 Exide Recycling Center, Frisco TX

Hello,

Attached, please find the Sample Confirmation files for job 600-113214; Exide Recycling Center, Frisco TX

Please feel free to contact me if you have any questions.

Thank you.

Please let us know if we met your expectations by rating the service you received from TestAmerica on this project by visiting our website at: [Project Feedback](#)

**CATHY L UPTON**  
 Project Manager I

**TestAmerica Houston**  
 THE LEADER IN ENVIRONMENTAL TESTING

Tel: 713.690.4444  
[www.testamericainc.com](http://www.testamericainc.com)

Reference: [250474]  
 Attachments: 3

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113214-1

**Login Number: 113214**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	0.3 0.9
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-113214-3

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

8/3/2015 6:26:44 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-113214-3 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

8/3/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/3/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-3
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/3/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-3
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/3/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-113214-3
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-115500-A-8-C MS/MSD ^5 failed the recovery criteria for the following analyte(s): Lead. Matrix interference is suspected due to the high concentration of lead in the parent sample.
R10B	Method 6010B: The following sample was diluted to bring the concentration of target analytes within the calibration range: ECO-11C 0.5-2 (600-113214-22). Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

**Job ID: 600-113214-3**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-113214-3**

### Comments

No additional comments.

### Receipt

The samples were received on 6/12/2015 9:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.3° C and 0.9° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-113214-22	ECO-11C 0.5-2	Solid	06/11/15 14:25	06/12/15 09:57

1

2

3

4

5

6

7

8

9

10

11

12

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14

15

## Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

**Client Sample ID: ECO-11C 0.5-2**

**Lab Sample ID: 600-113214-22**

**Date Collected: 06/11/15 14:25**

**Matrix: Solid**

**Date Received: 06/12/15 09:57**

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26	H	1.0	1.0	%			07/31/15 10:09	1
Percent Solids	74	H	1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: ECO-11C 0.5-2**

**Lab Sample ID: 600-113214-22**

**Date Collected: 06/11/15 14:25**

**Matrix: Solid**

**Date Received: 06/12/15 09:57**

**Percent Solids: 74.4**

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16.8		6.72	1.46	mg/Kg	☼	07/31/15 11:32	08/03/15 12:19	5
Lead	17.2		3.36	0.706	mg/Kg	☼	07/31/15 11:32	08/03/15 12:19	5

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

### Qualifiers

#### Metals

Qualifier	Qualifier Description
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
U	Analyte was not detected at or above the SDL.

#### General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-168312/1-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/31/15 11:32	08/03/15 10:44	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/31/15 11:32	08/03/15 10:44	1

Lab Sample ID: LCS 600-168312/2-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	113	109.8		mg/Kg		97	78 - 122
Lead	90.1	85.19		mg/Kg		95	79 - 121

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-115500-A-8-C MS ^5  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic - DL	13.5		62.9	71.62		mg/Kg	☼	92	75 - 125
Lead - DL	146		62.9	82.81	N1	mg/Kg	☼	-101	75 - 125

Lab Sample ID: 600-115500-A-8-D MSD ^5  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic - DL	13.5		60.5	67.98		mg/Kg	☼	90	75 - 125	5	20
Lead - DL	146		60.5	80.47	N1	mg/Kg	☼	-109	75 - 125	3	20

Lab Sample ID: 600-115500-A-8-B DU ^5  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic - DL	13.5		13.64		mg/Kg	☼	1	20
Lead - DL	146		178.1		mg/Kg	☼	20	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-113214-22 DU  
Matrix: Solid  
Analysis Batch: 168295

Client Sample ID: ECO-11C 0.5-2  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	26	H	26		%		0	20
Percent Solids	74	H	74		%		0	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

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

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

### Metals

#### Prep Batch: 168312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-22 - DL	ECO-11C 0.5-2	Total/NA	Solid	3050B	
600-115500-A-8-B DU	Duplicate	Total/NA	Solid	3050B	
600-115500-A-8-B DU ^5 - D	Duplicate	Total/NA	Solid	3050B	
600-115500-A-8-C MS ^5 - C	Matrix Spike	Total/NA	Solid	3050B	
600-115500-A-8-D MSD ^5 -	Matrix Spike Duplicate	Total/NA	Solid	3050B	
LCS 600-168312/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-168312/1-A	Method Blank	Total/NA	Solid	3050B	

#### Analysis Batch: 168450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-22 - DL	ECO-11C 0.5-2	Total/NA	Solid	6010B	168312
600-115500-A-8-B DU	Duplicate	Total/NA	Solid	6010B	168312
600-115500-A-8-B DU ^5 - D	Duplicate	Total/NA	Solid	6010B	168312
600-115500-A-8-C MS ^5 - C	Matrix Spike	Total/NA	Solid	6010B	168312
600-115500-A-8-D MSD ^5 -	Matrix Spike Duplicate	Total/NA	Solid	6010B	168312
LCS 600-168312/2-A	Lab Control Sample	Total/NA	Solid	6010B	168312
MB 600-168312/1-A	Method Blank	Total/NA	Solid	6010B	168312

### General Chemistry

#### Analysis Batch: 168295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-113214-22	ECO-11C 0.5-2	Total/NA	Solid	Moisture	
600-113214-22 DU	ECO-11C 0.5-2	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

**Client Sample ID: ECO-11C 0.5-2**

**Date Collected: 06/11/15 14:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-22**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: ECO-11C 0.5-2**

**Date Collected: 06/11/15 14:25**

**Date Received: 06/12/15 09:57**

**Lab Sample ID: 600-113214-22**

**Matrix: Solid**

**Percent Solids: 74.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.00 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.00 g	50 mL	168450	08/03/15 12:19	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-113214-3

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-4445

## Chain of Custody Record



COC No: 600-36678-12035.1  
Page. Page 1 of 4  
Job #



600-113214 Chain of Custody

Lab PM,  
Upton, Cathy L  
E-Mail

Sampler: J. L. G. 641  
Phone: (832) 416-5888

<b>Client Information</b>
Client Contact Anne Faeth-Boyd

<b>Preservation Codes:</b>	A - HCl	M - Hexane
B - NaOH	N - None	O - NaOAc
C - Zn Acetate	P - NaOAc	R - Na2S2O3
D - Nitric Acid	Q - Na2O4S	S - H2SO4
E - NaHSO4	T - TSP	U - Acetone
F - MeOH	V - MCAA	W - ph 4-5
G - Ammonia	X - TSP	Z - other (specify)
H - Ascorbic Acid	Y - Dodecylaldehyde	
I - Ice		
J - J. D. Waller		
K - EDTA		
L - L - EDTA		
Other:		

done with NISA

Sample (Yes or No)	Yes or No	Compound List	rhod	DB-As, Cd, Pb, Se, Sb

--	--	--	--	--	--	--	--

Due Date Requested:	
TIAT Requested (days):	10 Days
PO #:	
Purchase Order Requested	
WO #:	
Project #:	
	600006523
SSOW#:	

Address:	820 South Main Street Suite 100
City	St. Charles
State Zip:	MO, 63301
Phone:	836-724-9191
E-mail:	golderaeth@golder.com
Project Name:	Exide Recycling Center, Frisco TX
Site:	

**Special Instructions/Note:**

	X	X	Total Number
	X	X	80106
	D		6910B - (MOD) 6
	A		8260B - (MOD) 7

Field Filtered 3	X	X		
Perform MSMA	X	X		
6260B - Target C	N	N		
Molsture - Local	N	N		
6010B - (MOD)	N	N		

Sample type comp, (rab)	Matrix (W=water, S=solid, O=water/cell, BT=Tissue, A=Air)	Preservation Code	Solid
-------------------------	---	-------------------	-------

Sample Date	Sample Time	Sample Type	Sample Description
4/1/5	10:30	Water	Water sample from the river

Sample Identification	Sample Number	Sample Date
505 - EITA-28A	0-02	0-02

ms/msd included	Hold	Hold	ms/msd included
ms/msd included	Hold	Hold	ms/msd included

[illegible]

→	X	X	
X			X
Z	Z	Z	Z

S	Solid
S	Solid
S	Solid
S	Solid

6/11/15	↓	↓
6/11/15	-	↓
6/11/15	0.25	↓

2015 - FETA - 08A	0-5-2
2015 - FETA - 08A	2-4
Dup - 08	
2015 - NIDA - U	0-0-5

1941

A 10x10 grid. An arrow points to the 5th column. The 5th and 6th rows are marked with an 'X'.

	X	X	
Z	Z	Z	Z

	Solid
G	Solid
G	Solid
G	Solid


[illegible]

2013-NDA-11	2-4
2015-NDA-11	2-4
DND-07	
2015-NDA-12	0-0.3

Hold	For	Months
longer than 1 month)		

Client ☐ Disposal By Lab ☐ Archive ☐

[illegible]

6	
---	---

B	Unknown		Radiologist
---	---------	--	-------------

2015-NDA-02 2-4

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison

Deliverable Requested: I, II, III, IV, Other (specify)

957	Company
	Company
	Company

10/2/15	Date/Time
	Date/Time
	Date/Time

Received by:	Received by:	Received by:	Cooler Temperature

Company	Golden
Company	
Company	

Date/Time: 6/11/15 18:06

Date/Time:

Date/Time:

Reinquished by: <u>John S. Smith</u>	Custody Seal No.:
Reinquished by:	
Reinquished by:	

## Chain of Custody Record

TestAmerica

THE FOLLOWING INFORMATION IS REQUIRED

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golder Associates Inc. Address: 920 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site: Exide Recycling Center, Frisco TX		Lab P.M. Upton, Cathy L E-Mail: cathy.upton@testamericainc.com		Camer Tracking No(s): 600-36678-12035.1 Page: 2 of 4 Job #:	
Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #: Project #: 80006523 SOW#:		<b>Analysis Requested</b> In Accordance with 60108 Pb 60108 As			
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=Comp, G=Grab) Matrix (W=Water, S=solid, O=wastewater, BT=tissue, AS=air)		Preservation Codes: A-HCL B-NaOH C-Zn Acetate D-Nitric Acid E-NaHSO4 F-MeOH G-Ambiclor H-Ascorbic Acid I-Ice J-DI Water K-EDTA L-EDA Other: M-Hexane N-None O-AsNaO2 P-Na2O4S Q-Na2SO3 R-Na2S2O3 S-H2SO4 T-TSP Dodecahydrate U-Acetone V-MCAA W-ph 4-5 Z-other (specify)			
Sample ID 2015-NDA-13 2015-NDA-13 2015-NDA-13 ECo-11A ECo-11A ECo-11B ECo-11B ECo-11C ECo-11C		Sample Date 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15 6/11/15		Sample Time 0-0.5 0.5-2 2-4 0-0.5 0.5-2 2-4 0-0.5 0.5-2 2-4 0-0.5 0.5-2	
Matrix Solid Solid Solid Solid Solid Solid Solid Solid Solid		Field Filtered Sample (Yes or No) 8260B - (MOD) Target Compound List 8010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 8260B - (MOD) Target Compound List 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb Total Number of Containers			
Special Instructions/Note: Hold Hold Hold Hold Hold Hold Hold Hold Hold		Special Instructions/Note: Hold Hold Hold Hold Hold Hold Hold Hold Hold			
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological					
<b>Deliverable Requested:</b> I, II, III, IV, Other (specify)					
<b>Empty Kit Relinquished by:</b>					
<b>Relinquished by:</b> JAG 5016 A 1810 6/11/15					
<b>Relinquished by:</b>					
<b>Relinquished by:</b>					
<b>Custody Seal No.:</b>					
<b>Custody Seal No.:</b>					

# Chain of Custody Record

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street, Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site: Exide Recycling Center, Frisco TX		Lab PM: Epton, Cathy L E-Mail: cathy.upton@testamericainc.com Phone: (832) 416 3888 TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #: 80006523 Project #: 80006523 SSON#:		Due Date Requested: TAT Requested (days): 10 Days PO #: Purchase Order Requested WO #: 80006523 Project #: 80006523 SSON#:		Carrier Tracking No(s): 600-36678-12035.1 Page: 3 of 4 Job #:	
<b>Sample Identification</b> Sample ID: ELO-11C 2-4 Sample ID: ELO-11D 0-0.5 Sample ID: ELO-11D 0.5-2 Sample ID: ELO-11D 2-4 Sample ID: 2015-C2L-06D 0.5-2 Sample ID: 2015-C2L-06D 2-4 Sample ID: 2015-C2L-01D 0-0.5 Sample ID: 2015-C2L-01D 0.5-2 Sample ID: Dup-09 Sample ID: 2015-FACS -SA 0-0.5				Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15 Sample Date: 6/11/15		Sample Time: 1425 Sample Time: 1450 Sample Time: 1 Sample Time: 1 Sample Time: 1 Sample Time: 1 Sample Time: 1 Sample Time: 1 Sample Time: 1	
Matrix (W=Water, S=Solid, O=Organic, G=Grab) Solid Solid Solid Solid Solid Solid Solid Solid Solid				Preservation Code: G G G G G G G G G		Field Filtered Sample (Yes or No) N N N N N N N N N	
Moisture - Local Method N N N N N N N N N				Moisture - Target Compound List N N N N N N N N N		6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb 6010B - (MOD) 6010B-As, Cd, Pb, Se, Sb	
Total Number of Containers X X X X X X X X X				Special Instructions/Note: Held Held Held Held Held Held Held Held Held		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:			
Relinquished by: JAG SAG XI				Date/Time: 6/11/15 1810			
Relinquished by:				Date/Time:			
Relinquished by:				Date/Time:			
Custody Seals Intact Δ Yes Δ No				Cooler Temperature(s) °C and Other Remarks:			

Phone (713) 690-4444 Fax (713) 690-5646

## COC No:

TestAmerica Houston

Loc: 600  
113214TestAmerica  
15 JUL 2015 8:57  
THE LEADER IN ENVIRONMENTAL TESTING

Sample

checklist

JOB NUMBER: \_\_\_\_\_

Date/Time Received: \_\_\_\_\_

CLIENT: Golden

UNPACKED BY: \_\_\_\_\_

CARRIER/DRIVER: FE

Custody Seal Present:

☐ YES☒ NONumber of Coolers Received: 2

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
<u>RW</u>	Y / N	Y / N	<u>0.3</u>	<u>6680</u>	<u>0</u>	<u>0.3</u>
<u>RW</u>	Y / N	Y / N	<u>0.9</u>	<u>1</u>	<u>1</u>	<u>0.9</u>
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice?

☒ YES☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YESBase samples are > pH 12: ☐ YES ☐ NO

Acid preserved are &lt; pH 2:

☒ YES☐ NO

pH paper Lot #

HCS47770

VOA headspace acceptable (5-6mm):

☐ YES☐ NO☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:



**Upton, Cathy**

**From:** Faeth-Boyd, Anne [Anne\_Faeth-Boyd@golder.com]  
**Sent:** Sunday, July 19, 2015 11:42 PM  
**To:** Upton, Cathy  
**Cc:** Thomas, Jim; Higginbotham, Christina  
**Subject:** please run 5 hold samples  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy,

Can we please run the following hold samples:

ECO-11C (0.5-2) – arsenic and lead  
 2015-CUFT-16B (0.5-2) - lead  
 D-11C (2-4) - arsenic  
 2015-MW-17D (2-4) – antimony, arsenic, and lead  
 2015-SCC-16B (0.5-2) – lead

Thanks,  
 Anne

---

**Anne Faeth-Boyd, R.G., P.E.** | Senior Engineer | **Golder Associates Inc.**  
 820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301  
**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
[www.golder.com](http://www.golder.com)

**Work Safe, Home Safe**

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**Please consider the environment before printing this email.**



## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-113214-3

**Login Number: 113214**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	0.3 0.9
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



## Data Usability Summary

Test America Work Orders: 600-115590-1, 600-115554-1, 600-115500-1

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<b>Sample Dates:</b>	July 27, 28, and 29, 2015	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 600-115590-1, 600-115554-1, 600-115500-1		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

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## 1.0 TESTS/ METHODS

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)  
Percent moisture/percent solids (general chemistry)

## 2.0 SAMPLES

32 soil samples, two field duplicates, and one field MS/MSD pair. See Table 1 for a complete cross-referenced listing of samples.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.

The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures
- Results Reporting Procedures



## Data Usability Summary

Test America Work Orders: 600-115590-1, 600-115554-1, 600-115500-1

- Laboratory and Field QC Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or ‘see’ in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or ‘see’ in a given sample. For TRRP, non-detects are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.



## Data Usability Summary

Test America Work Orders: 600-115590-1, 600-115554-1, 600-115500-1

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report.

## USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1  $^{Tot}Soil_{Comb}$  and Tier 1, 2 or 3  $^{GW}Soil_{Ing}$  PCLs for a 30-acre source area. As needed per TRRP, the unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria.
2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high can be used; however, the reported concentration may be high. Detects that are estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.



Reviewer: Christina Higginbotham 8/20/15

## QUALITY CONTROL PARAMETERS AND OUTCOMES

### Data Completeness

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format.

### Chain-of-Custody

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, with the following exceptions:

- Trip Blanks were listed on the chain-of-custody for 600-115500, but were not present in the cooler. Since no VOCs were analyzed, this does not present an issue.
- IDs on the sample container did not match the chain-of-custody for 600-115554 (the chain-of-custody indicated ECO-18 2-3.5' and the label indicated ECO-18 2-4'). In this case, the records were logged in per the chain-of-custody.
- A number of deeper interval samples were archived at the laboratory pending results of shallow interval samples.

### Sample Condition

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation. Although temperatures were marginally outside of 2-6 °C in some cases, sample integrity is not believed to be affected:

- 600-115590-1, the temperature of the cooler at receipt was 3.1°C.
- 600-115554-1, the temperature of the cooler at receipt was 1.4°C.
- 600-115500-1, the temperature of the cooler at receipt was 0.5°C and 0.8°C.

### Field Procedures

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.

Two site-specific MS/MSDs and two field duplicate samples were analyzed with the investigative samples.



## Results Reporting Procedures

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.

Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

**MQLs-** The LORPs have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte.

**MDLs-** According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

## Laboratory Blanks

Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. No analytes were detected in the laboratory blanks.

## Field QC Blanks

No field QC blanks were collected as part of these data packages.

## Laboratory Control Sample

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects, except for the following:

- 600-115500-1, antimony had slightly low LCS recoveries of 61% and 51.6% which is slightly below TRRP criteria of 70-130%. Samples in the associated batch 168312 and 168365 are qualified in Table 2 (detected = JL, non-detected=UJL).



## Matrix Spike Recovery

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using designated samples from the site for job package 115500-1, which includes two MS/MSDs for Total Metals, as shown in Table 1. The lab also selected site samples as MS/MSDs for job packages 115554-1 and 115590-1.

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
168496	600-115590-10	2014-C2L-C01-A	Lead	718	47.0, NA	-139	NA	-
168496	600-115590-10	2014-C2L-C01-A	Lead-DL	701	47.0, NA	-136	NA	-
168365	600-115554-6	ECO-18 (0-0.5)	Lead-DL	218	69.1	657	845	-
168312	115500-8	G-5B (0.5-2)	Antimony	0.283 U	62.9	25	22	UJL
168312	115500-19	G-6D (0.5-2)	Antimony	0.283 U	63.9	33	36	UJL
168312	115500-8	G-5B (0.5-2)	Lead (DL)	146	62.9	-101	-109	-
168312	115500-19	G-5D (0.5-2)	Lead (DL)	157	63.9	217	611	-

NA – Not available.

In sample 115590-10, 115554-6, 115500-8, 15500-19, the lead spike amount is sufficiently less than the amount in the unspiked parent sample; thus, the data are considered inconclusive and the MS/MSD recovery check was waived. MS/MSD recoveries were not evaluated in cases where the laboratory selected samples were unrelated to the site.

For the low MS/MSD recovery for antimony, although antimony is non-detect, the recoveries are slightly below 30% (in one case) and above 30% in the other case, and within laboratory control limits in both cases. The non-detect data is accepted as estimated with a low bias for samples in the same preparation batch from same matrix.

## Surrogate Recovery

Since organic analyses were not requested for these data packages, surrogate recoveries were not evaluated.





## Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals analytical batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes one MSD and MD for Total Metals.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	MSD RPD	MD RPD	Qual
168496	600-115590-10	2014-C2L-C01-A	Lead	718	NR	16	-
168496	600-115590-10	2014-C2L-C01-A	Lead (DL)	701	NR	16	-
168365	600-115554-6	ECO-18 (0-0.5)	Lead (DL)	218	16	33	J (parent)
168312	115500-8	G-5B (0.5-2)	Antimony	0.283 U	16	NC	-
168312	115500-19	G-6D (0.5-2)	Antimony	0.283 U	4	NC	-
168312	115500-19	G-6D (0.5-2)	Lead (DL)	157	56	137	J (batch)

Where MSD RPDs were acceptable and MD RPDs were only marginally above criteria, a batch effect was not indicated and the parent sample (only) was qualified as estimated.

## Field Duplicate Precision

Two field duplicates were collected with the samples. Results are summarized in Table 3. The RPDs (or the absolute difference between results for concentrations <5x MQL and for non-detects) are within the TRRP criteria, which indicates good precision for the sampling, preparation, and analysis technique on the given sample matrix.

## Instrument Tuning

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.

## Instrument Calibration

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations.

## Instrument Performance

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists.



## **Internal Standards**

According to the LRC, area counts and retention times were within method requirements.

**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Prep Batch/ Analysis Batch	Sample Date	Matrix	Comments
600-115500-1	B3RA-D (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-2	F-4A (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-3	F-4B (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-4	F-4C (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-5	F-4D (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-6	F-4E (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-7	G-5A (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-8	G-5B (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	site-specific MS/MSD (lab designated)
600-115500-9	G-5C (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-10	G-5D (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-11	G-6A (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	DUP-3
600-115500-17	G-6B (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-18	G-6C (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-19	G-6D (0.5-2)	168450 and 168138 / 168312	07/27/2015	Soil	site-specific MS/MSD (field designated)
600-115500-20	2015-SCC-16E (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	DUP-1
600-115500-21	2015-SCC-16F (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-22	2015-SCC-16G (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-23	2015-CUFT-16D (0-0.5)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-24	SCC-5D (2-4)	168450 and 168138 / 168312	07/27/2015	Soil	
600-115500-25	DUP-1	168450 and 168138 / 168365	07/27/2015	Soil	parent sample 2015 SCC-16E
600-115500-27	DUP-3	168450 and 168138 / 168365	07/27/2015	Soil	parent sample G-6A
600-115554-1	ECO-13 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-2	ECO-14 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-3	ECO-15 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-4	ECO-16 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-5	ECO-17 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-6	ECO-18 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115554-7	ECO-19 (0-0.5)	168554, 168234 / 168365	7/28/2015	Soil	
600-115590-1	2015-C2L-06G (0-0.5)	168647, 168554 / 168496	07/29/2015	Soil	
600-115590-4	2015-C2L-06H (0.5-1)	168647, 168554 / 168496	07/29/2015	Soil	
600-115590-7	2015-C2L-06K (0-0.5)	168647, 168554 / 168496	07/29/2015	Soil	
600-115590-10	2015-C2L-06J (0-0.5)	168647, 168554 / 168496	07/29/2015	Soil	
600-115590-13	D-11 F (0-0.5)	168647, 168554 / 168496	07/29/2015	Soil	
600-115590-16	E-15B (0.0-5)	168647, 168554 / 168496	07/29/2015	Soil	

TABLE 2 - QUALIFIED DATA

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifier	Explanation
600-115500-1	B3RA-D (0-0.5)	Cadmium	0.152	mg/Kg	J	Estimated concentration between SDL and MQL
600-115500-1	B3RA-D (0-0.5)	Antimony	<0.262	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-1	B3RA-D (0-0.5)	Lead	30.7	mg/Kg	J	MSD/MD RPD above criteria
600-115500-2	F-4A (0-0.5)	Antimony	<0.289	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-2	F-4A (0-0.5)	Lead	178	mg/Kg	J	MSD/MD RPD above criteria
600-115500-3	F-4B (0-0.5)	Antimony	<0.295	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-3	F-4B (0-0.5)	Lead	18.3	mg/Kg	J	MSD/MD RPD above criteria
600-115500-4	F-4C (0-0.5)	Antimony	<0.285	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-4	F-4C (0-0.5)	Lead	69.5	mg/Kg	J	MSD/MD RPD above criteria
600-115500-5	F-4D (0-0.5)	Lead	20.8	mg/Kg	J	MSD/MD RPD above criteria
600-115500-5	F-4D (0-0.5)	Antimony	<0.297	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-6	F-4E (0.5-2)	Antimony	<0.280	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-6	F-4E (0.5-2)	Lead	25.1	mg/Kg	J	MSD/MD RPD above criteria
600-115500-7	G-5A (0.5-2)	Selenium	0.339	mg/Kg	J	Estimated concentration between SDL and MQL
600-115500-7	G-5A (0.5-2)	Lead	176	mg/Kg	J	MSD/MD RPD above criteria
600-115500-7	G-5A (0.5-2)	Antimony	<0.286	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-8	G-5B (0.5-2)	Antimony	<0.283	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-8	G-5B (0.5-2)	Lead	146	mg/Kg	J	MSD/MD RPD above criteria
600-115500-9	G-5C (0.5-2)	Selenium	0.323	mg/Kg	J	Estimated concentration between SDL and MQL
600-115500-9	G-5C (0.5-2)	Lead	193	mg/Kg	J	MSD/MD RPD above criteria
600-115500-9	G-5C (0.5-2)	Antimony	<0.278	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-10	G-5D (0.5-2)	Antimony	<0.298	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-10	G-5D (0.5-2)	Lead	153	mg/Kg	J	MSD/MD RPD above criteria
600-115500-11	G-6A (0.5-2)	Lead	41.5	mg/Kg	J	MSD/MD RPD above criteria
600-115500-11	G-6A (0.5-2)	Antimony	<0.273	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-17	G-6B (0-0.5)	Antimony	<0.269	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-17	G-6B (0-0.5)	Lead	102	mg/Kg	J	MSD/MD RPD above criteria
600-115500-18	G-6C (0-0.5)	Lead	33.3	mg/Kg	J	MSD/MD RPD above criteria
600-115500-18	G-6C (0-0.5)	Antimony	<0.263	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-19	G-6D (0.5-2)	Antimony	<0.285	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-19	G-6D (0.5-2)	Lead	157	mg/Kg	J	MSD/MD RPD above criteria
600-115500-20	2015-SCC-16E (0-0.5)	Lead	215	mg/Kg	J	MSD/MD RPD above criteria
600-115500-20	2015-SCC-16E (0-0.5)	Antimony	<0.257	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-21	2015-SCC-16F (0-0.5)	Antimony	<0.257	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-21	2015-SCC-16F (0-0.5)	Lead	104	mg/Kg	J	MSD/MD RPD above criteria
600-115500-22	2015-SCC-16G (0-0.5)	Lead	282	mg/Kg	J	MSD/MD RPD above criteria
600-115500-22	2015-SCC-16G (0-0.5)	Antimony	0.671	mg/Kg	JL	Estimated concentration between SDL and MQ; low LCS recovery; low MS/MSD recovery
600-115500-23	2015-CUFT-16D (0-0.5)	Antimony	<0.256	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-23	2015-CUFT-16D (0-0.5)	Lead	114	mg/Kg	J	MSD/MD RPD above criteria
600-115500-24	SCC-5D (2-4)	Lead	637	mg/Kg	J	MSD/MD RPD above criteria
600-115500-24	SCC-5D (2-4)	Cadmium	0.160	mg/Kg	J	Estimated concentration between SDL and MQL
600-115500-24	SCC-5D (2-4)	Antimony	<0.256	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115500-25	DUP-1	Antimony	0.920	mg/Kg	JL	Estimated concentration between SDL and MQL; low LCS recovery; low MS/MSD recovery
600-115500-27	DUP-3	Antimony	<0.275	mg/Kg	UJL	low LCS recovery; low MS/MSD recovery
600-115554-6	ECO-18 (0-0.5)	Lead	218	mg/Kg	J	MD RPD above criteria

Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data; The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data; The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected; Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data; The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

UJ Not detected; The analyte was not detected &gt;5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data; The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low

**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added
DUP-01 / 2015 SCC-16E	antimony	0.257 U	0.920 J	NC	A	-
	cadmium	0.487	0.543	10.9	A	-
	selenium	0.287 U	0.287 U	NC	A	-
DUP-03 / G-6A	antimony	0.273 U	0.275 U	NC	A	-
	cadmium	0.842	0.671	22.6	A	-
	selenium	0.305 U	0.307 U	NC	A	-

<sup>a</sup> RPD = ((SR - DR)\*200)/(SR + DR)

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.

NC - Not calculated if one or both results were non-detect

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-115500-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.

820 South Main Street

Suite 100

St. Charles, Missouri 63301

Attn: Anne Faeth-Boyd



Authorized for release by:

8/4/2015 5:54:37 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-115500-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Nicole Boyken, for Cathy Upton

Name (printed)



Signature

8/4/2015

Date

Project Manager I

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/4/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115500-1
Reviewer Name:	Nicole Boyken, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/4/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115500-1
Reviewer Name:	Nicole Boyken, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/4/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115500-1
Reviewer Name:	Nicole Boyken, for Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-115500-19 MS/MSD and 600-115500-8 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.
R07D	Method 6010B: 600-115500-19 MSD failed the RPD criteria for the following analyte(s): Lead.
R08C	Method 6010B: 600-115500-19 DU failed the RPD criteria for the following analyte(s): Arsenic, Cadmium, Lead. Method 6010B: 600-115554-A-6-B DU failed the RPD criteria for the following analyte(s): Antimony, Cadmium, Selenium.
R10B	Method 6010B: The following samples were diluted due to bring the concentration of target analytes within calibration range: B3RA-D (0-0.5) (600-115500-1), F-4A (0-0.5) (600-115500-2), F-4B (0-0.5) (600-115500-3), F-4C (0-0.5) (600-115500-4), F-4D (0-0.5) (600-115500-5), F-4E (0.5-2) (600-115500-6), G-5A (0.5-2) (600-115500-7), G-5B (0.5-2) (600-115500-8), G-5C (0.5-2) (600-115500-9), G-5D (0.5-2) (600-115500-10), G-6A (0.5-2) (600-115500-11), G-6B (0-0.5) (600-115500-17), G-6C (0-0.5) (600-115500-18), G-6D (0.5-2) (600-115500-19), G-6D (0.5-2) (600-115500-19[MS]), G-6D (0.5-2) (600-115500-19[MSD]), 2015-SCC-16E (0-0.5) (600-115500-20), 2015-SCC-16F (0-0.5) (600-115500-21), 2015-SCC-16G (0-0.5) (600-115500-22), 2015-CUFT-16D (0-0.5) (600-115500-23), DUP-1 (600-115500-25), DUP-3 (600-115500-27), (600-115500-A-8-B DU), (600-115500-A-8-C MS), (600-115500-A-8-D MSD) and (600-115500-A-19-B DU). Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Job ID: 600-115500-1**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-115500-1**

### Comments

No additional comments.

### Receipt

The samples were received on 7/28/2015 10:07 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.5° C and 0.8° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-115500-1	B3RA-D (0-0.5)	Solid	07/27/15 08:10	07/28/15 10:07
600-115500-2	F-4A (0-0.5)	Solid	07/27/15 13:40	07/28/15 10:07
600-115500-3	F-4B (0-0.5)	Solid	07/27/15 13:38	07/28/15 10:07
600-115500-4	F-4C (0-0.5)	Solid	07/27/15 13:27	07/28/15 10:07
600-115500-5	F-4D (0-0.5)	Solid	07/27/15 13:27	07/28/15 10:07
600-115500-6	F-4E (0.5-2)	Solid	07/27/15 13:20	07/28/15 10:07
600-115500-7	G-5A (0.5-2)	Solid	07/27/15 11:12	07/28/15 10:07
600-115500-8	G-5B (0.5-2)	Solid	07/27/15 10:44	07/28/15 10:07
600-115500-9	G-5C (0.5-2)	Solid	07/27/15 11:00	07/28/15 10:07
600-115500-10	G-5D (0.5-2)	Solid	07/27/15 11:11	07/28/15 10:07
600-115500-11	G-6A (0.5-2)	Solid	07/27/15 14:43	07/28/15 10:07
600-115500-17	G-6B (0-0.5)	Solid	07/27/15 14:50	07/28/15 10:07
600-115500-18	G-6C (0-0.5)	Solid	07/27/15 14:28	07/28/15 10:07
600-115500-19	G-6D (0.5-2)	Solid	07/27/15 14:34	07/28/15 10:07
600-115500-20	2015-SCC-16E (0-0.5)	Solid	07/27/15 09:12	07/28/15 10:07
600-115500-21	2015-SCC-16F (0-0.5)	Solid	07/27/15 09:25	07/28/15 10:07
600-115500-22	2015-SCC-16G (0-0.5)	Solid	07/27/15 08:50	07/28/15 10:07
600-115500-23	2015-CUFT-16D (0-0.5)	Solid	07/27/15 09:58	07/28/15 10:07
600-115500-24	SCC-5D (2-4)	Solid	07/27/15 07:45	07/28/15 10:07
600-115500-25	DUP-1	Solid	07/27/15 00:00	07/28/15 10:07
600-115500-27	DUP-3	Solid	07/27/15 00:00	07/28/15 10:07

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: B3RA-D (0-0.5)**

Date Collected: 07/27/15 08:10

Date Received: 07/28/15 10:07

**Lab Sample ID: 600-115500-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	85		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: B3RA-D (0-0.5)**

Date Collected: 07/27/15 08:10

Date Received: 07/28/15 10:07

**Lab Sample ID: 600-115500-1**

Matrix: Solid

Percent Solids: 85.3

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.262	U	2.82	0.262	mg/Kg	☼	07/31/15 11:32	08/03/15 10:51	1
Cadmium	0.152	J	0.282	0.0289	mg/Kg	☼	07/31/15 11:32	08/03/15 10:51	1
Selenium	0.292	U	2.26	0.292	mg/Kg	☼	07/31/15 11:32	08/03/15 10:51	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.54		2.26	0.492	mg/Kg	☼	07/31/15 11:32	08/03/15 12:22	2
Lead	30.7		1.13	0.237	mg/Kg	☼	07/31/15 11:32	08/03/15 12:22	2

**Client Sample ID: F-4A (0-0.5)**

Date Collected: 07/27/15 13:40

Date Received: 07/28/15 10:07

**Lab Sample ID: 600-115500-2**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	79		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: F-4A (0-0.5)**

Date Collected: 07/27/15 13:40

Date Received: 07/28/15 10:07

**Lab Sample ID: 600-115500-2**

Matrix: Solid

Percent Solids: 78.6

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.289	U	3.12	0.289	mg/Kg	☼	07/31/15 11:32	08/03/15 10:54	1
Cadmium	1.90		0.312	0.0319	mg/Kg	☼	07/31/15 11:32	08/03/15 10:54	1
Selenium	0.323	U	2.49	0.323	mg/Kg	☼	07/31/15 11:32	08/03/15 10:54	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.4		6.24	1.36	mg/Kg	☼	07/31/15 11:32	08/03/15 12:24	5
Lead	178		3.12	0.655	mg/Kg	☼	07/31/15 11:32	08/03/15 12:24	5

**Client Sample ID: F-4B (0-0.5)**

Date Collected: 07/27/15 13:38

Date Received: 07/28/15 10:07

**Lab Sample ID: 600-115500-3**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	79		1.0	1.0	%			07/29/15 17:21	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: F-4B (0-0.5)

Date Collected: 07/27/15 13:38

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-3

Matrix: Solid

Percent Solids: 78.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.295	U	3.17	0.295	mg/Kg	☼	07/31/15 11:32	08/03/15 10:56	1
Cadmium	0.597		0.317	0.0325	mg/Kg	☼	07/31/15 11:32	08/03/15 10:56	1
Selenium	0.329	U	2.54	0.329	mg/Kg	☼	07/31/15 11:32	08/03/15 10:56	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.1		6.35	1.38	mg/Kg	☼	07/31/15 11:32	08/03/15 12:26	5
Lead	18.3		3.17	0.667	mg/Kg	☼	07/31/15 11:32	08/03/15 12:26	5

## Client Sample ID: F-4C (0-0.5)

Date Collected: 07/27/15 13:27

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-4

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	78		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: F-4C (0-0.5)

Date Collected: 07/27/15 13:27

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-4

Matrix: Solid

Percent Solids: 78.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.285	U	3.07	0.285	mg/Kg	☼	07/31/15 11:32	08/03/15 10:59	1
Cadmium	0.847		0.307	0.0314	mg/Kg	☼	07/31/15 11:32	08/03/15 10:59	1
Selenium	0.318	U	2.46	0.318	mg/Kg	☼	07/31/15 11:32	08/03/15 10:59	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.4		6.14	1.34	mg/Kg	☼	07/31/15 11:32	08/03/15 12:29	5
Lead	69.5		3.07	0.645	mg/Kg	☼	07/31/15 11:32	08/03/15 12:29	5

## Client Sample ID: F-4D (0-0.5)

Date Collected: 07/27/15 13:27

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-5

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	73		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: F-4D (0-0.5)

Date Collected: 07/27/15 13:27

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-5

Matrix: Solid

Percent Solids: 72.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.297	U	3.20	0.297	mg/Kg	☼	07/31/15 11:32	08/03/15 11:01	1
Cadmium	0.763		0.320	0.0328	mg/Kg	☼	07/31/15 11:32	08/03/15 11:01	1
Selenium	0.332	U	2.56	0.332	mg/Kg	☼	07/31/15 11:32	08/03/15 11:01	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: F-4D (0-0.5)

Date Collected: 07/27/15 13:27

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-5

Matrix: Solid

Percent Solids: 72.9

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.6		6.41	1.40	mg/Kg	☼	07/31/15 11:32	08/03/15 12:31	5
Lead	20.8		3.20	0.673	mg/Kg	☼	07/31/15 11:32	08/03/15 12:31	5

## Client Sample ID: F-4E (0.5-2)

Date Collected: 07/27/15 13:20

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-6

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	76		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: F-4E (0.5-2)

Date Collected: 07/27/15 13:20

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-6

Matrix: Solid

Percent Solids: 76.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.280	U	3.01	0.280	mg/Kg	☼	07/31/15 11:32	08/03/15 11:04	1
Cadmium	0.663		0.301	0.0309	mg/Kg	☼	07/31/15 11:32	08/03/15 11:04	1
Selenium	0.312	U	2.41	0.312	mg/Kg	☼	07/31/15 11:32	08/03/15 11:04	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.3		6.03	1.31	mg/Kg	☼	07/31/15 11:32	08/03/15 12:33	5
Lead	25.1		3.01	0.633	mg/Kg	☼	07/31/15 11:32	08/03/15 12:33	5

## Client Sample ID: G-5A (0.5-2)

Date Collected: 07/27/15 11:12

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-7

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	80		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: G-5A (0.5-2)

Date Collected: 07/27/15 11:12

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-7

Matrix: Solid

Percent Solids: 80.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.286	U	3.09	0.286	mg/Kg	☼	07/31/15 11:32	08/03/15 11:06	1
Cadmium	1.99		0.309	0.0316	mg/Kg	☼	07/31/15 11:32	08/03/15 11:06	1
Selenium	0.339	J	2.47	0.320	mg/Kg	☼	07/31/15 11:32	08/03/15 11:06	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.5		6.17	1.35	mg/Kg	☼	07/31/15 11:32	08/03/15 12:35	5
Lead	176		3.09	0.648	mg/Kg	☼	07/31/15 11:32	08/03/15 12:35	5

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: G-5B (0.5-2)**

**Date Collected: 07/27/15 10:44**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-8**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	80		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: G-5B (0.5-2)**

**Date Collected: 07/27/15 10:44**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-8**

**Matrix: Solid**

**Percent Solids: 79.5**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.283	U	3.05	0.283	mg/Kg	☼	07/31/15 11:32	08/03/15 11:16	1
Cadmium	1.25		0.305	0.0313	mg/Kg	☼	07/31/15 11:32	08/03/15 11:16	1
Selenium	0.316	U	2.44	0.316	mg/Kg	☼	07/31/15 11:32	08/03/15 11:16	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.5		6.10	1.33	mg/Kg	☼	07/31/15 11:32	08/03/15 12:38	5
Lead	146		3.05	0.641	mg/Kg	☼	07/31/15 11:32	08/03/15 12:38	5

**Client Sample ID: G-5C (0.5-2)**

**Date Collected: 07/27/15 11:00**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-9**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	79		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: G-5C (0.5-2)**

**Date Collected: 07/27/15 11:00**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-9**

**Matrix: Solid**

**Percent Solids: 78.9**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.278	U	2.99	0.278	mg/Kg	☼	07/31/15 11:32	08/03/15 11:26	1
Cadmium	1.78		0.299	0.0306	mg/Kg	☼	07/31/15 11:32	08/03/15 11:26	1
Selenium	0.323	J	2.39	0.310	mg/Kg	☼	07/31/15 11:32	08/03/15 11:26	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.8		5.98	1.30	mg/Kg	☼	07/31/15 11:32	08/03/15 12:54	5
Lead	193		2.99	0.628	mg/Kg	☼	07/31/15 11:32	08/03/15 12:54	5

**Client Sample ID: G-5D (0.5-2)**

**Date Collected: 07/27/15 11:11**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-10**

**Matrix: Solid**

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	78		1.0	1.0	%			07/29/15 17:21	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: G-5D (0.5-2)

Date Collected: 07/27/15 11:11

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-10

Matrix: Solid

Percent Solids: 78.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.298	U	3.21	0.298	mg/Kg	☼	07/31/15 11:32	08/03/15 11:28	1
Cadmium	1.30		0.321	0.0328	mg/Kg	☼	07/31/15 11:32	08/03/15 11:28	1
Selenium	0.332	U	2.57	0.332	mg/Kg	☼	07/31/15 11:32	08/03/15 11:28	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.6		6.41	1.40	mg/Kg	☼	07/31/15 11:32	08/03/15 12:56	5
Lead	153		3.21	0.674	mg/Kg	☼	07/31/15 11:32	08/03/15 12:56	5

## Client Sample ID: G-6A (0.5-2)

Date Collected: 07/27/15 14:43

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-11

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	82		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: G-6A (0.5-2)

Date Collected: 07/27/15 14:43

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-11

Matrix: Solid

Percent Solids: 81.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.273	U	2.95	0.273	mg/Kg	☼	07/31/15 11:32	08/03/15 11:31	1
Cadmium	0.842		0.295	0.0302	mg/Kg	☼	07/31/15 11:32	08/03/15 11:31	1
Selenium	0.305	U	2.36	0.305	mg/Kg	☼	07/31/15 11:32	08/03/15 11:31	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16.3		5.89	1.28	mg/Kg	☼	07/31/15 11:32	08/03/15 12:58	5
Lead	41.5		2.95	0.619	mg/Kg	☼	07/31/15 11:32	08/03/15 12:58	5

## Client Sample ID: G-6B (0-0.5)

Date Collected: 07/27/15 14:50

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-17

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	81		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: G-6B (0-0.5)

Date Collected: 07/27/15 14:50

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-17

Matrix: Solid

Percent Solids: 81.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.269	U	2.90	0.269	mg/Kg	☼	07/31/15 11:32	08/03/15 11:33	1
Cadmium	1.63		0.290	0.0297	mg/Kg	☼	07/31/15 11:32	08/03/15 11:33	1
Selenium	0.301	U	2.32	0.301	mg/Kg	☼	07/31/15 11:32	08/03/15 11:33	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: G-6B (0-0.5)

Date Collected: 07/27/15 14:50

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-17

Matrix: Solid

Percent Solids: 81.2

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.9		5.81	1.27	mg/Kg	☼	07/31/15 11:32	08/03/15 13:00	5
Lead	102		2.90	0.610	mg/Kg	☼	07/31/15 11:32	08/03/15 13:00	5

## Client Sample ID: G-6C (0-0.5)

Date Collected: 07/27/15 14:28

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-18

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	82		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: G-6C (0-0.5)

Date Collected: 07/27/15 14:28

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-18

Matrix: Solid

Percent Solids: 81.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.263	U	2.83	0.263	mg/Kg	☼	07/31/15 11:32	08/03/15 11:36	1
Cadmium	0.385		0.283	0.0290	mg/Kg	☼	07/31/15 11:32	08/03/15 11:36	1
Selenium	0.293	U	2.26	0.293	mg/Kg	☼	07/31/15 11:32	08/03/15 11:36	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.0		2.26	0.494	mg/Kg	☼	07/31/15 11:32	08/03/15 13:03	2
Lead	33.3		1.13	0.238	mg/Kg	☼	07/31/15 11:32	08/03/15 13:03	2

## Client Sample ID: G-6D (0.5-2)

Date Collected: 07/27/15 14:34

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-19

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	77		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: G-6D (0.5-2)

Date Collected: 07/27/15 14:34

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-19

Matrix: Solid

Percent Solids: 77.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.285	U	3.07	0.285	mg/Kg	☼	07/31/15 11:32	08/03/15 11:39	1
Cadmium	0.855		0.307	0.0315	mg/Kg	☼	07/31/15 11:32	08/03/15 11:39	1
Selenium	0.319	U	2.46	0.319	mg/Kg	☼	07/31/15 11:32	08/03/15 11:39	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.7		6.15	1.34	mg/Kg	☼	07/31/15 11:32	08/03/15 13:05	5
Lead	157		3.07	0.646	mg/Kg	☼	07/31/15 11:32	08/03/15 13:05	5

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: 2015-SCC-16E (0-0.5)**

**Lab Sample ID: 600-115500-20**

Date Collected: 07/27/15 09:12

Matrix: Solid

Date Received: 07/28/15 10:07

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	87		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: 2015-SCC-16E (0-0.5)**

**Lab Sample ID: 600-115500-20**

Date Collected: 07/27/15 09:12

Matrix: Solid

Date Received: 07/28/15 10:07

Percent Solids: 86.8

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.257	U	2.77	0.257	mg/Kg	☼	07/31/15 11:32	08/03/15 11:55	1
Cadmium	0.487		0.277	0.0284	mg/Kg	☼	07/31/15 11:32	08/03/15 11:55	1
Selenium	0.287	U	2.22	0.287	mg/Kg	☼	07/31/15 11:32	08/03/15 11:55	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.2		5.54	1.21	mg/Kg	☼	07/31/15 11:32	08/03/15 13:21	5
Lead	215		2.77	0.582	mg/Kg	☼	07/31/15 11:32	08/03/15 13:21	5

**Client Sample ID: 2015-SCC-16F (0-0.5)**

**Lab Sample ID: 600-115500-21**

Date Collected: 07/27/15 09:25

Matrix: Solid

Date Received: 07/28/15 10:07

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	83		1.0	1.0	%			07/29/15 17:21	1

**Client Sample ID: 2015-SCC-16F (0-0.5)**

**Lab Sample ID: 600-115500-21**

Date Collected: 07/27/15 09:25

Matrix: Solid

Date Received: 07/28/15 10:07

Percent Solids: 82.9

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.257	U	2.77	0.257	mg/Kg	☼	07/31/15 11:32	08/03/15 11:58	1
Cadmium	0.597		0.277	0.0283	mg/Kg	☼	07/31/15 11:32	08/03/15 11:58	1
Selenium	0.286	U	2.21	0.286	mg/Kg	☼	07/31/15 11:32	08/03/15 11:58	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.2		5.53	1.21	mg/Kg	☼	07/31/15 11:32	08/03/15 13:23	5
Lead	104		2.77	0.581	mg/Kg	☼	07/31/15 11:32	08/03/15 13:23	5

**Client Sample ID: 2015-SCC-16G (0-0.5)**

**Lab Sample ID: 600-115500-22**

Date Collected: 07/27/15 08:50

Matrix: Solid

Date Received: 07/28/15 10:07

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	87		1.0	1.0	%			07/29/15 17:21	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: 2015-SCC-16G (0-0.5)

Date Collected: 07/27/15 08:50

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-22

Matrix: Solid

Percent Solids: 86.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.671	J	2.80	0.260	mg/Kg	☼	07/31/15 11:32	08/03/15 12:00	1
Cadmium	1.45		0.280	0.0286	mg/Kg	☼	07/31/15 11:32	08/03/15 12:00	1
Selenium	0.290	U	2.24	0.290	mg/Kg	☼	07/31/15 11:32	08/03/15 12:00	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.0		2.24	0.488	mg/Kg	☼	07/31/15 11:32	08/03/15 13:25	2
Lead	282		1.12	0.235	mg/Kg	☼	07/31/15 11:32	08/03/15 13:25	2

## Client Sample ID: 2015-CUFT-16D (0-0.5)

Date Collected: 07/27/15 09:58

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-23

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	82		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: 2015-CUFT-16D (0-0.5)

Date Collected: 07/27/15 09:58

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-23

Matrix: Solid

Percent Solids: 82.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.256	U	2.76	0.256	mg/Kg	☼	07/31/15 11:32	08/03/15 12:03	1
Cadmium	0.828		0.276	0.0283	mg/Kg	☼	07/31/15 11:32	08/03/15 12:03	1
Selenium	0.286	U	2.21	0.286	mg/Kg	☼	07/31/15 11:32	08/03/15 12:03	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.9		5.52	1.20	mg/Kg	☼	07/31/15 11:32	08/03/15 13:27	5
Lead	114		2.76	0.580	mg/Kg	☼	07/31/15 11:32	08/03/15 13:27	5

## Client Sample ID: SCC-5D (2-4)

Date Collected: 07/27/15 07:45

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-24

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	87		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: SCC-5D (2-4)

Date Collected: 07/27/15 07:45

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-24

Matrix: Solid

Percent Solids: 87.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.256	U	2.76	0.256	mg/Kg	☼	07/31/15 11:32	08/03/15 12:05	1
Arsenic	2.54		1.11	0.241	mg/Kg	☼	07/31/15 11:32	08/03/15 12:05	1
Cadmium	0.160	J	0.276	0.0283	mg/Kg	☼	07/31/15 11:32	08/03/15 12:05	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: SCC-5D (2-4)

Date Collected: 07/27/15 07:45

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-24

Matrix: Solid

Percent Solids: 87.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	637		0.553	0.116	mg/Kg	☼	07/31/15 11:32	08/03/15 12:05	1
Selenium	0.286	U	2.21	0.286	mg/Kg	☼	07/31/15 11:32	08/03/15 12:05	1

## Client Sample ID: DUP-1

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-25

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	89		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: DUP-1

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-25

Matrix: Solid

Percent Solids: 89.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.920	J	2.77	0.257	mg/Kg	☼	07/31/15 17:33	08/03/15 13:34	1
Cadmium	0.543		0.277	0.0284	mg/Kg	☼	07/31/15 17:33	08/03/15 13:34	1
Selenium	0.287	U	2.22	0.287	mg/Kg	☼	07/31/15 17:33	08/03/15 13:34	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12.2		5.55	1.21	mg/Kg	☼	07/31/15 17:33	08/03/15 14:58	5
Lead	580		2.77	0.582	mg/Kg	☼	07/31/15 17:33	08/03/15 14:58	5

## Client Sample ID: DUP-3

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-27

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			07/29/15 17:21	1
Percent Solids	81		1.0	1.0	%			07/29/15 17:21	1

## Client Sample ID: DUP-3

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-27

Matrix: Solid

Percent Solids: 81.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.275	U	2.97	0.275	mg/Kg	☼	07/31/15 17:33	08/03/15 13:36	1
Cadmium	0.671		0.297	0.0304	mg/Kg	☼	07/31/15 17:33	08/03/15 13:36	1
Selenium	0.307	U	2.37	0.307	mg/Kg	☼	07/31/15 17:33	08/03/15 13:36	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.6		5.94	1.29	mg/Kg	☼	07/31/15 17:33	08/03/15 15:00	5
Lead	26.0		2.97	0.623	mg/Kg	☼	07/31/15 17:33	08/03/15 15:00	5

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
N2	RPD of the MS and MSD exceeds the control limits

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-168312/1-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		07/31/15 11:32	08/03/15 10:44	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/31/15 11:32	08/03/15 10:44	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		07/31/15 11:32	08/03/15 10:44	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/31/15 11:32	08/03/15 10:44	1
Selenium	0.259	U	2.00	0.259	mg/Kg		07/31/15 11:32	08/03/15 10:44	1

Lab Sample ID: LCS 600-168312/2-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	94.0	56.95		mg/Kg		61	50 - 150
Arsenic	113	109.8		mg/Kg		97	78 - 122
Cadmium	67.5	65.99		mg/Kg		98	81 - 119
Lead	90.1	85.19		mg/Kg		95	79 - 121
Selenium	156	149.4		mg/Kg		96	80 - 120

Lab Sample ID: 600-115500-8 MS  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.283	U	62.9	15.49	N1	mg/Kg	☼	25	75 - 125
Cadmium	1.25		31.4	29.97		mg/Kg	☼	91	75 - 125
Selenium	0.316	U	62.9	54.36		mg/Kg	☼	86	75 - 125

Lab Sample ID: 600-115500-8 MSD  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.283	U	60.5	13.23	N1	mg/Kg	☼	22	75 - 125	16	20
Cadmium	1.25		30.2	29.48		mg/Kg	☼	93	75 - 125	2	20
Selenium	0.316	U	60.5	53.10		mg/Kg	☼	88	75 - 125	2	20

Lab Sample ID: 600-115500-19 MS  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)  
Prep Type: Total/NA  
Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.285	U	63.9	21.07	N1	mg/Kg	☼	33	75 - 125
Cadmium	0.855		32.0	32.58		mg/Kg	☼	99	75 - 125
Selenium	0.319	U	63.9	59.70		mg/Kg	☼	93	75 - 125

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

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

Lab Sample ID: 600-115500-19 MSD

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.285	U	60.3	21.85	N1	mg/Kg	☼	36	75 - 125	4	20
Cadmium	0.855		30.2	34.62		mg/Kg	☼	112	75 - 125	6	20
Selenium	0.319	U	60.3	59.02		mg/Kg	☼	98	75 - 125	1	20

Lab Sample ID: 600-115500-8 DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.283	U	0.283	U	mg/Kg	☼	NC	20
Cadmium	1.25		1.422		mg/Kg	☼	13	20
Selenium	0.316	U	0.316	U	mg/Kg	☼	NC	20

Lab Sample ID: 600-115500-19 DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.285	U	0.8466	J	mg/Kg	☼	NC	20
Cadmium	0.855		4.136	F	mg/Kg	☼	131	20
Selenium	0.319	U	0.316	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-168365/1-A

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 168365

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		07/31/15 17:33	08/03/15 13:30	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/31/15 17:33	08/03/15 13:30	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		07/31/15 17:33	08/03/15 13:30	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/31/15 17:33	08/03/15 13:30	1
Selenium	0.259	U	2.00	0.259	mg/Kg		07/31/15 17:33	08/03/15 13:30	1

Lab Sample ID: LCSSRM 600-168365/2-A

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	94.0	48.55		mg/Kg		51.6	1.1 - 213.8
Arsenic	113	105.7		mg/Kg		93.5	78.2 - 122.1
Cadmium	67.5	61.63		mg/Kg		91.3	82.2 - 117.8
Lead	90.1	81.68		mg/Kg		90.7	81.7 - 118.8
Selenium	156	142.5		mg/Kg		91.3	77.6 - 121.8

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

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

Lab Sample ID: 600-115541-A-6-C MS

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.230	U	46.7	41.12		mg/Kg		88	75 - 125
Arsenic	1.23		46.7	51.31		mg/Kg		107	75 - 125
Cadmium	0.376		23.4	24.85		mg/Kg		105	75 - 125
Lead	0.208	J	46.7	46.63		mg/Kg		99	75 - 125
Selenium	0.256	U	46.7	49.81		mg/Kg		107	75 - 125

Lab Sample ID: 600-115541-A-6-B DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.230	U	0.230	U	mg/Kg		NC	20
Arsenic	1.23		1.158		mg/Kg		6	20
Cadmium	0.376		0.3663		mg/Kg		3	20
Lead	0.208	J	0.1980	J	mg/Kg		5	20
Selenium	0.256	U	0.256	U	mg/Kg		NC	20

Lab Sample ID: 600-115554-A-6-B DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.954	J	0.4579	J	mg/Kg	⚠	70	20
Arsenic	27.0		23.56		mg/Kg	⚠	14	20
Cadmium	1.74		2.297	F	mg/Kg	⚠	27	20
Selenium	1.14	J	0.5143	J	mg/Kg	⚠	76	20

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-115500-8 MS

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic - DL	13.5		62.9	71.62		mg/Kg	⚠	92	75 - 125
Lead - DL	146		62.9	82.81	N1	mg/Kg	⚠	-101	75 - 125

Lab Sample ID: 600-115500-8 MSD

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic - DL	13.5		60.5	67.98		mg/Kg	⚠	90	75 - 125	5	20
Lead - DL	146		60.5	80.47	N1	mg/Kg	⚠	-109	75 - 125	3	20

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Method: 6010B - Metals (ICP) - DL (Continued)

Lab Sample ID: 600-115500-19 MS

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	%Rec.
Arsenic - DL	11.7		63.9	76.23		mg/Kg	☼	101	75 - 125	
Lead - DL	157		63.9	296.0	N1	mg/Kg	☼	217	75 - 125	

Lab Sample ID: 600-115500-19 MSD

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic - DL	11.7		60.3	77.81		mg/Kg	☼	110	75 - 125	2	20
Lead - DL	157		60.3	525.6	N1 N2	mg/Kg	☼	611	75 - 125	56	20

Lab Sample ID: 600-115500-8 DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-5B (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic - DL	13.5		13.64		mg/Kg	☼	1	20
Lead - DL	146		178.1		mg/Kg	☼	20	20

Lab Sample ID: 600-115500-19 DU

Matrix: Solid

Analysis Batch: 168450

Client Sample ID: G-6D (0.5-2)

Prep Type: Total/NA

Prep Batch: 168312

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic - DL	11.7		14.71		mg/Kg	☼	23	20
Lead - DL	157		847.5	F	mg/Kg	☼	137	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-115500-6 DU

Matrix: Solid

Analysis Batch: 168138

Client Sample ID: F-4E (0.5-2)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	24		24		%		2	20
Percent Solids	76		76		%		0.6	20

Lab Sample ID: 600-115500-21 DU

Matrix: Solid

Analysis Batch: 168138

Client Sample ID: 2015-SCC-16F (0-0.5)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	17		18		%		5	20
Percent Solids	83		82		%		1	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B
Selenium	2.00	0.259	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Metals

### Prep Batch: 168312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-1	B3RA-D (0-0.5)	Total/NA	Solid	3050B	
600-115500-1 - DL	B3RA-D (0-0.5)	Total/NA	Solid	3050B	
600-115500-2 - DL	F-4A (0-0.5)	Total/NA	Solid	3050B	
600-115500-2	F-4A (0-0.5)	Total/NA	Solid	3050B	
600-115500-3 - DL	F-4B (0-0.5)	Total/NA	Solid	3050B	
600-115500-3	F-4B (0-0.5)	Total/NA	Solid	3050B	
600-115500-4 - DL	F-4C (0-0.5)	Total/NA	Solid	3050B	
600-115500-4	F-4C (0-0.5)	Total/NA	Solid	3050B	
600-115500-5 - DL	F-4D (0-0.5)	Total/NA	Solid	3050B	
600-115500-5	F-4D (0-0.5)	Total/NA	Solid	3050B	
600-115500-6 - DL	F-4E (0.5-2)	Total/NA	Solid	3050B	
600-115500-6	F-4E (0.5-2)	Total/NA	Solid	3050B	
600-115500-7	G-5A (0.5-2)	Total/NA	Solid	3050B	
600-115500-7 - DL	G-5A (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 - DL	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 DU - DL	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 DU	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 MS - DL	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 MS	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 MSD	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-8 MSD - DL	G-5B (0.5-2)	Total/NA	Solid	3050B	
600-115500-9	G-5C (0.5-2)	Total/NA	Solid	3050B	
600-115500-9 - DL	G-5C (0.5-2)	Total/NA	Solid	3050B	
600-115500-10 - DL	G-5D (0.5-2)	Total/NA	Solid	3050B	
600-115500-10	G-5D (0.5-2)	Total/NA	Solid	3050B	
600-115500-11 - DL	G-6A (0.5-2)	Total/NA	Solid	3050B	
600-115500-11	G-6A (0.5-2)	Total/NA	Solid	3050B	
600-115500-17 - DL	G-6B (0-0.5)	Total/NA	Solid	3050B	
600-115500-17	G-6B (0-0.5)	Total/NA	Solid	3050B	
600-115500-18 - DL	G-6C (0-0.5)	Total/NA	Solid	3050B	
600-115500-18	G-6C (0-0.5)	Total/NA	Solid	3050B	
600-115500-19 - DL	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 DU - DL	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 DU	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 MS	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 MS - DL	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 MSD	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-19 MSD - DL	G-6D (0.5-2)	Total/NA	Solid	3050B	
600-115500-20 - DL	2015-SCC-16E (0-0.5)	Total/NA	Solid	3050B	
600-115500-20	2015-SCC-16E (0-0.5)	Total/NA	Solid	3050B	
600-115500-21	2015-SCC-16F (0-0.5)	Total/NA	Solid	3050B	
600-115500-21 - DL	2015-SCC-16F (0-0.5)	Total/NA	Solid	3050B	
600-115500-22 - DL	2015-SCC-16G (0-0.5)	Total/NA	Solid	3050B	
600-115500-22	2015-SCC-16G (0-0.5)	Total/NA	Solid	3050B	
600-115500-23	2015-CUFT-16D (0-0.5)	Total/NA	Solid	3050B	
600-115500-23 - DL	2015-CUFT-16D (0-0.5)	Total/NA	Solid	3050B	
600-115500-24	SCC-5D (2-4)	Total/NA	Solid	3050B	
LCS 600-168312/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-168312/1-A	Method Blank	Total/NA	Solid	3050B	

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Metals (Continued)

### Prep Batch: 168365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-25 - DL	DUP-1	Total/NA	Solid	3050B	
600-115500-25	DUP-1	Total/NA	Solid	3050B	
600-115500-27	DUP-3	Total/NA	Solid	3050B	
600-115500-27 - DL	DUP-3	Total/NA	Solid	3050B	
600-115541-A-6-B DU	Duplicate	Total/NA	Solid	3050B	
600-115541-A-6-C MS	Matrix Spike	Total/NA	Solid	3050B	
600-115554-A-6-B DU	Duplicate	Total/NA	Solid	3050B	
LCSSRM 600-168365/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-168365/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 168450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-1	B3RA-D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-1 - DL	B3RA-D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-2	F-4A (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-2 - DL	F-4A (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-3	F-4B (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-3 - DL	F-4B (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-4	F-4C (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-4 - DL	F-4C (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-5	F-4D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-5 - DL	F-4D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-6	F-4E (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-6 - DL	F-4E (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-7	G-5A (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-7 - DL	G-5A (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 - DL	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 DU	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 DU - DL	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 MS	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 MS - DL	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 MSD	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-8 MSD - DL	G-5B (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-9	G-5C (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-9 - DL	G-5C (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-10	G-5D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-10 - DL	G-5D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-11	G-6A (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-11 - DL	G-6A (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-17	G-6B (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-17 - DL	G-6B (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-18	G-6C (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-18 - DL	G-6C (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-19	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 - DL	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 DU	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 DU - DL	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 MS	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 MS - DL	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-19 MSD	G-6D (0.5-2)	Total/NA	Solid	6010B	168312

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Metals (Continued)

### Analysis Batch: 168450 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-19 MSD - DL	G-6D (0.5-2)	Total/NA	Solid	6010B	168312
600-115500-20	2015-SCC-16E (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-20 - DL	2015-SCC-16E (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-21	2015-SCC-16F (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-21 - DL	2015-SCC-16F (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-22	2015-SCC-16G (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-22 - DL	2015-SCC-16G (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-23	2015-CUFT-16D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-23 - DL	2015-CUFT-16D (0-0.5)	Total/NA	Solid	6010B	168312
600-115500-24	SCC-5D (2-4)	Total/NA	Solid	6010B	168312
600-115500-25	DUP-1	Total/NA	Solid	6010B	168365
600-115500-25 - DL	DUP-1	Total/NA	Solid	6010B	168365
600-115500-27	DUP-3	Total/NA	Solid	6010B	168365
600-115500-27 - DL	DUP-3	Total/NA	Solid	6010B	168365
600-115541-A-6-B DU	Duplicate	Total/NA	Solid	6010B	168365
600-115541-A-6-C MS	Matrix Spike	Total/NA	Solid	6010B	168365
600-115554-A-6-B DU	Duplicate	Total/NA	Solid	6010B	168365
LCS 600-168312/2-A	Lab Control Sample	Total/NA	Solid	6010B	168312
LCSSRM 600-168365/2-A	Lab Control Sample	Total/NA	Solid	6010B	168365
MB 600-168312/1-A	Method Blank	Total/NA	Solid	6010B	168312
MB 600-168365/1-A	Method Blank	Total/NA	Solid	6010B	168365

## General Chemistry

### Analysis Batch: 168138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-1	B3RA-D (0-0.5)	Total/NA	Solid	Moisture	
600-115500-2	F-4A (0-0.5)	Total/NA	Solid	Moisture	
600-115500-3	F-4B (0-0.5)	Total/NA	Solid	Moisture	
600-115500-4	F-4C (0-0.5)	Total/NA	Solid	Moisture	
600-115500-5	F-4D (0-0.5)	Total/NA	Solid	Moisture	
600-115500-6	F-4E (0.5-2)	Total/NA	Solid	Moisture	
600-115500-6 DU	F-4E (0.5-2)	Total/NA	Solid	Moisture	
600-115500-7	G-5A (0.5-2)	Total/NA	Solid	Moisture	
600-115500-8	G-5B (0.5-2)	Total/NA	Solid	Moisture	
600-115500-9	G-5C (0.5-2)	Total/NA	Solid	Moisture	
600-115500-10	G-5D (0.5-2)	Total/NA	Solid	Moisture	
600-115500-11	G-6A (0.5-2)	Total/NA	Solid	Moisture	
600-115500-17	G-6B (0-0.5)	Total/NA	Solid	Moisture	
600-115500-18	G-6C (0-0.5)	Total/NA	Solid	Moisture	
600-115500-19	G-6D (0.5-2)	Total/NA	Solid	Moisture	
600-115500-19 MS	G-6D (0.5-2)	Total/NA	Solid	Moisture	
600-115500-19 MSD	G-6D (0.5-2)	Total/NA	Solid	Moisture	
600-115500-20	2015-SCC-16E (0-0.5)	Total/NA	Solid	Moisture	
600-115500-21	2015-SCC-16F (0-0.5)	Total/NA	Solid	Moisture	
600-115500-21 DU	2015-SCC-16F (0-0.5)	Total/NA	Solid	Moisture	
600-115500-22	2015-SCC-16G (0-0.5)	Total/NA	Solid	Moisture	
600-115500-23	2015-CUFT-16D (0-0.5)	Total/NA	Solid	Moisture	
600-115500-24	SCC-5D (2-4)	Total/NA	Solid	Moisture	
600-115500-25	DUP-1	Total/NA	Solid	Moisture	

TestAmerica Houston

## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

### General Chemistry (Continued)

#### Analysis Batch: 168138 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115500-27	DUP-3	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: B3RA-D (0-0.5)**

**Date Collected: 07/27/15 08:10**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: B3RA-D (0-0.5)**

**Date Collected: 07/27/15 08:10**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-1**

**Matrix: Solid**

**Percent Solids: 85.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 10:51	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.04 g	50 mL	168450	08/03/15 12:22	DCL	TAL HOU

**Client Sample ID: F-4A (0-0.5)**

**Date Collected: 07/27/15 13:40**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: F-4A (0-0.5)**

**Date Collected: 07/27/15 13:40**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-2**

**Matrix: Solid**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	168450	08/03/15 10:54	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.02 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.02 g	50 mL	168450	08/03/15 12:24	DCL	TAL HOU

**Client Sample ID: F-4B (0-0.5)**

**Date Collected: 07/27/15 13:38**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-3**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: F-4B (0-0.5)**

**Date Collected: 07/27/15 13:38**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-3**

**Matrix: Solid**

**Percent Solids: 78.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: F-4B (0-0.5)**

**Date Collected: 07/27/15 13:38**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-3**

**Matrix: Solid**

**Percent Solids: 78.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.00 g	50 mL	168450	08/03/15 10:56	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.00 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.00 g	50 mL	168450	08/03/15 12:26	DCL	TAL HOU

**Client Sample ID: F-4C (0-0.5)**

**Date Collected: 07/27/15 13:27**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-4**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: F-4C (0-0.5)**

**Date Collected: 07/27/15 13:27**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-4**

**Matrix: Solid**

**Percent Solids: 78.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 10:59	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	168450	08/03/15 12:29	DCL	TAL HOU

**Client Sample ID: F-4D (0-0.5)**

**Date Collected: 07/27/15 13:27**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-5**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: F-4D (0-0.5)**

**Date Collected: 07/27/15 13:27**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-5**

**Matrix: Solid**

**Percent Solids: 72.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	168450	08/03/15 11:01	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.07 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.07 g	50 mL	168450	08/03/15 12:31	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: F-4E (0.5-2)**

**Date Collected: 07/27/15 13:20**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-6**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: F-4E (0.5-2)**

**Date Collected: 07/27/15 13:20**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-6**

**Matrix: Solid**

**Percent Solids: 76.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	168450	08/03/15 11:04	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	168450	08/03/15 12:33	DCL	TAL HOU

**Client Sample ID: G-5A (0.5-2)**

**Date Collected: 07/27/15 11:12**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-5A (0.5-2)**

**Date Collected: 07/27/15 11:12**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-7**

**Matrix: Solid**

**Percent Solids: 80.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	168450	08/03/15 11:06	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.01 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.01 g	50 mL	168450	08/03/15 12:35	DCL	TAL HOU

**Client Sample ID: G-5B (0.5-2)**

**Date Collected: 07/27/15 10:44**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-8**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-5B (0.5-2)**

**Date Collected: 07/27/15 10:44**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-8**

**Matrix: Solid**

**Percent Solids: 79.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: G-5B (0.5-2)**

**Date Collected: 07/27/15 10:44**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-8**

**Matrix: Solid**

**Percent Solids: 79.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.03 g	50 mL	168450	08/03/15 11:16	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.03 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	168450	08/03/15 12:38	DCL	TAL HOU

**Client Sample ID: G-5C (0.5-2)**

**Date Collected: 07/27/15 11:00**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-9**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-5C (0.5-2)**

**Date Collected: 07/27/15 11:00**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-9**

**Matrix: Solid**

**Percent Solids: 78.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	168450	08/03/15 11:26	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	168450	08/03/15 12:54	DCL	TAL HOU

**Client Sample ID: G-5D (0.5-2)**

**Date Collected: 07/27/15 11:11**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-10**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-5D (0.5-2)**

**Date Collected: 07/27/15 11:11**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-10**

**Matrix: Solid**

**Percent Solids: 78.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	168450	08/03/15 11:28	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.00 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.00 g	50 mL	168450	08/03/15 12:56	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: G-6A (0.5-2)**

**Date Collected: 07/27/15 14:43**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-11**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-6A (0.5-2)**

**Date Collected: 07/27/15 14:43**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-11**

**Matrix: Solid**

**Percent Solids: 81.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 11:31	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	168450	08/03/15 12:58	DCL	TAL HOU

**Client Sample ID: G-6B (0-0.5)**

**Date Collected: 07/27/15 14:50**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-17**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-6B (0-0.5)**

**Date Collected: 07/27/15 14:50**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-17**

**Matrix: Solid**

**Percent Solids: 81.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	168450	08/03/15 11:33	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	168450	08/03/15 13:00	DCL	TAL HOU

**Client Sample ID: G-6C (0-0.5)**

**Date Collected: 07/27/15 14:28**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-18**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-6C (0-0.5)**

**Date Collected: 07/27/15 14:28**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-18**

**Matrix: Solid**

**Percent Solids: 81.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: G-6C (0-0.5)**

**Date Collected: 07/27/15 14:28**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-18**

**Matrix: Solid**

**Percent Solids: 81.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.08 g	50 mL	168450	08/03/15 11:36	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.08 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.08 g	50 mL	168450	08/03/15 13:03	DCL	TAL HOU

**Client Sample ID: G-6D (0.5-2)**

**Date Collected: 07/27/15 14:34**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-19**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: G-6D (0.5-2)**

**Date Collected: 07/27/15 14:34**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-19**

**Matrix: Solid**

**Percent Solids: 77.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	168450	08/03/15 11:39	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	168450	08/03/15 13:05	DCL	TAL HOU

**Client Sample ID: 2015-SCC-16E (0-0.5)**

**Date Collected: 07/27/15 09:12**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-20**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16E (0-0.5)**

**Date Collected: 07/27/15 09:12**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-20**

**Matrix: Solid**

**Percent Solids: 86.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 11:55	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	168450	08/03/15 13:21	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: 2015-SCC-16F (0-0.5)**

**Lab Sample ID: 600-115500-21**

**Date Collected: 07/27/15 09:25**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16F (0-0.5)**

**Lab Sample ID: 600-115500-21**

**Date Collected: 07/27/15 09:25**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

**Percent Solids: 82.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	168450	08/03/15 11:58	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	168450	08/03/15 13:23	DCL	TAL HOU

**Client Sample ID: 2015-SCC-16G (0-0.5)**

**Lab Sample ID: 600-115500-22**

**Date Collected: 07/27/15 08:50**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: 2015-SCC-16G (0-0.5)**

**Lab Sample ID: 600-115500-22**

**Date Collected: 07/27/15 08:50**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

**Percent Solids: 86.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	168450	08/03/15 12:00	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.03 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.03 g	50 mL	168450	08/03/15 13:25	DCL	TAL HOU

**Client Sample ID: 2015-CUFT-16D (0-0.5)**

**Lab Sample ID: 600-115500-23**

**Date Collected: 07/27/15 09:58**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

**Client Sample ID: 2015-CUFT-16D (0-0.5)**

**Lab Sample ID: 600-115500-23**

**Date Collected: 07/27/15 09:58**

**Matrix: Solid**

**Date Received: 07/28/15 10:07**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.10 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Client Sample ID: 2015-CUFT-16D (0-0.5)

Date Collected: 07/27/15 09:58

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-23

Matrix: Solid

Percent Solids: 82.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.10 g	50 mL	168450	08/03/15 12:03	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.10 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.10 g	50 mL	168450	08/03/15 13:27	DCL	TAL HOU

## Client Sample ID: SCC-5D (2-4)

Date Collected: 07/27/15 07:45

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

## Client Sample ID: SCC-5D (2-4)

Date Collected: 07/27/15 07:45

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-24

Matrix: Solid

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168312	07/31/15 11:32	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 12:05	DCL	TAL HOU

## Client Sample ID: DUP-1

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

## Client Sample ID: DUP-1

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-25

Matrix: Solid

Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	168450	08/03/15 13:34	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.01 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.01 g	50 mL	168450	08/03/15 14:58	DCL	TAL HOU

## Client Sample ID: DUP-3

Date Collected: 07/27/15 00:00

Date Received: 07/28/15 10:07

## Lab Sample ID: 600-115500-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168138	07/29/15 17:21	MJB	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

**Client Sample ID: DUP-3**

**Date Collected: 07/27/15 00:00**

**Date Received: 07/28/15 10:07**

**Lab Sample ID: 600-115500-27**

**Matrix: Solid**

**Percent Solids: 81.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	168450	08/03/15 13:36	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.04 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.04 g	50 mL	168450	08/03/15 15:00	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115500-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



## Chain of Custody Record

<b>Client Information</b>		Lab Pk. Upton, Cathy L.		Carrier Tracking No(s) 900-37671-12289.7					
Client Contact: Anne Faeth-Boyd		E-Mail: cathy.upton@testamericainc.com		Page: <del>Page 2 of 6</del> 2 of 6					
Company: Golder Associates Inc.				Job #:					
Address: 820 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301		Due Date Requested: TAT Requested (days): PO # Exide 1302086 WO # Project #: 60006523 SSOW#		Analysis Requested					
Phone: 636-724-9191		Email: atafaeth@golder.com		Preservation Codes: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - other (specify) Other:					
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W-water, S-solid, O-oil, B-Bio, A-air)	Field Filtered Sample (Yes or No)	6010B, Moisture	6010B - (MOD) 6010B-Ae, Cd, Pb, Se, Sb	Total Number of Containers	Special Instructions/Note:
G-5B (0.5-2) MS	7/27/15	1046	Comp	Solid					Hold *
G-5B (0.5-2) MSD		1046		Solid					Hold *
G-6D (0.5-2) MS		1434		Solid					
G-6D (0.5-2) MSD		1434		Solid					
Trip Blank	-	-	-	Solid					
Trip Blank	-	-	-	Solid					
B3RA-D (0.5-2)	7/27/15	0812	Comp	Solid					Hold *
B3RA-D (2-4)		0814		Solid					Hold *
F-4A (0.5-2)		1342		Solid					Hold *
F-4A (2-4)		1346		Solid					Hold *
F-4B (0.5-2)		1346		Solid					Hold *
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiobiological Deliverable Requested: I, II, III, IV, Other (specify)									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment		Relinquished by:	
Relinquished by: Abby Mallory		7-27-15		1615		Edgeto		Company: Edgeto	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Received by:		Date/Time:		Company:	
Custody Seal Intact: A Yes    A No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					

TestAmerica Houston  
6310 Rathway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

TestAmerica  
THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information</b>		<b>Lab Pk:</b> Upton, Cathy L		<b>Carrier Tracking No(s):</b>		<b>DOC No:</b> 600-37671-12289.6	
<b>Client Contact:</b> Anne Faeth-Boyd		<b>E-Mail:</b> cathy.upton@testamericainc.com		<b>Page:</b> Page 2 of 6		<b>Job #:</b> 3096	
<b>Company:</b> Golder Associates Inc.		<b>Address:</b> 820 South Main Street Suite 100		<b>City:</b> St. Charles		<b>State, Zip:</b> MO, 63301	
<b>Phone:</b> 636-724-9191		<b>PO #:</b> Exide 1302086		<b>WO #:</b>		<b>Project #:</b> 60006523	
<b>Email:</b> afaeth@golder.com		<b>Site:</b> Exide Recycling Center, Frisco TX		<b>Due Date Requested:</b>		<b>FAT Requested (days):</b>	
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (Weigh, Sp-solid, Composite, 91-Tissue, A=Aliq)</b>	<b>Field Filtered Sample (Yes or No)</b>	<b>6010B Moisture</b>
G-6B (0-0.5)		7/27/15	1450	Comp	Solid		
G-6C (0-0.5)			1428		Solid		
G-6D (0.5-2)			1434		Solid		
2015-SCL-16E (0-0.5)			0912		Solid		
2015-SCL-16F (0-0.5)			0925		Solid		
2015-SCL-16G (0-0.5)			0850		Solid		
2015-CUFT-16D (0-0.5)			0958		Solid		
SCL-SD (2-4)			0745		Solid		
Dup-1					Solid		
Dup-2					Solid		
Dup-3					Solid		
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>		<b>Special Instructions/Note:</b>		<b>Preservation Codes:</b>	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
<b>Deliverable Requested: I, II, III, IV, Other (specify)</b>		<b>Special Instructions/QC Requirements:</b>		<b>Total Number of containers</b>			
<b>Empty Kit Relinquished by:</b>		<b>Time:</b>		<b>Method of Shipment:</b>			
<b>Relinquished by:</b>		<b>Date:</b>		<b>Received by:</b>		<b>Date:</b>	
<b>Relinquished by:</b>		<b>Date:</b>		<b>Received by:</b>		<b>Date:</b>	
<b>Relinquished by:</b>		<b>Date:</b>		<b>Received by:</b>		<b>Date:</b>	
<b>Custody Seals Intact:</b>		<b>Custody Seal No.:</b>		<b>Cooler Temperature(s) °C and Other Remarks:</b>			
Δ Yes Δ No							



# Chain of Custody Record

<b>Client Information</b> Client Contact: <u>Emily White / Mary M...</u> Phone: <u>314-304-1326</u> Company: <u>Golder Associates Inc.</u>		Lab P/N: <u>Upton, Cathy L</u> E-Mail: <u>cathy.upton@testamerica.com</u>		COC No: <u>600-37671-12289.8</u> Page: <u>4 of 6</u> Job #:					
Address: <u>820 South Main Street Suite 100</u> City: <u>St. Charles</u> State, Zip: <u>MO, 63301</u> Phone: <u>636-724-9191</u> Email: <u>elaeth@golder.com</u> Project Name: <u>Exide Recycling Center, Frisco TX</u> Site:		Due Date Requested: TAT Requested (days): PO #: <u>Exide 302086</u> WO #: <u>60006323</u> Project #: <u>SSOW#</u>		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	6010B - (MOD) 6010B, A9, C4, P6, S6, S8	6010B - Moisture	Total Number of Containers	Special Instructions/Notes
F-4B (2-4)	7/27/15	1342	Comp	S-ild		✓			Hold
F-4C (0.5-2)		1331		S-ild		✓			Hold
F-4C (2-4)		1337		S-ild		✓			Hold
F-4D (0.5-2)		1329		S-ild		✓			Hold
F-4D (2-4)		1330		S-ild		✓			Hold
F-4E (2-4)		1322		S-ild		✓			Hold
G-5A (0.5-2)		1119		S-ild		✓			Hold
G-5A (2-4)		1120		S-ild		✓			Hold
G-5B (0.5-2)		1046		S-ild		✓			Hold
G-5B (2-4)		1048		S-ild		✓			Hold
G-6B (0.5-2)		1452		S-ild		✓			Hold
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months									
Social Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Method of Shipment:		Received by:			
Relinquished by:		Date/Time:		Company:		Received by:			
Relinquished by:		Date/Time:		Company:		Received by:			
Relinquished by:		Date/Time:		Company:		Received by:			
Custody Seals Intact Yes No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					

## Chain of Custody Record

<b>Client Information</b> Client Contact: <u>Anne Faeth-Boyd</u> Company: <u>Golder Associates Inc.</u> Address: <u>820 South Main Street Suite 100</u> City: <u>St. Charles</u> State: <u>MO</u> Zip: <u>63301</u> Phone: <u>636-724-9191</u> Email: <u>afaeth@golder.com</u> Project Name: <u>Exide Recycling Center, Frisco TX</u> Site:		Lab P/N: <u>Upton, Cathy L</u> E-Mail: <u>cathy.upton@testamericainc.com</u> Phone: <u>312-304-1326</u> Date: <u>7/27/15</u>		Carrier Tracking No(s): QOC No: <u>600-37671-12289.9</u> Page: <u>5 of 6</u> Job #:	
<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): PO #: <u>Exide 1302086</u> WO #: <u>60006523</u> Project #: <u>SSOW#</u>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
<b>Sample Identification</b> Sample Date Sample Time Sample Type (C=comb, G=grab) Matrix (W=water, S=solid, O=organic, B=biological, A=acid)		Field Filtered Sample (Yes or No) 6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb 6010B - Moisture Preservation Codes:			
G-6B (2-4) G-5C (0.5-2) G-5C (2-4) G-5D (0.5-2) G-5D (2-4) G-6A (0.5-2) G-6A (2-4) G-6C (0.5-2) G-6C (2-4) G-6D (2-4) 2015-SC-106 (0.5-2)		Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid			
7/27/15 1454 1103 1105 1115 1117 1447 1450 1456 1432 1436 0914		X X X X X X X X X X X			
Special Instructions/Note: All held		Total Number of Containers:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:					
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date: <u>7/27/15</u> Time: <u>1615</u> Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Custody Seals Intact: <u>Yes</u> <input type="checkbox"/> No <input type="checkbox"/> Custody Seal No.: _____					



[illegible]

15 JUL 28 10:07

Sample Re

Loc: 600

1st

115500

Date/Time Received:

JOB NUMBER:

CLIENT:

Golder

UNPACKED BY:

CARRIER/DRIVER:

FB

Custody Seal Present:

☒ YES☐ NO

Number of Coolers Received:

2

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
RW	Y / N	Y / N	0.5	666	2	0.5
RW	Y / N	Y / N	0.8			0.8
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED:

☒ NO☐ YESBase samples are > pH 12: ☐ YES ☒ NO

Acid preserved are &lt; pH 2:

☐ YES☐ NO

pH paper Lot #:

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

Trip Blanks not in cooler but on COC

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-115500-1

**Login Number: 115500**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	0.5 0.8
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.	False	Trip blanks on COC not received
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040  
Tel: (713)690-4444

TestAmerica Job ID: 600-115554-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.  
820 South Main Street  
Suite 100  
St. Charles, Missouri 63301

Attn: Anne Faeth-Boyd



Authorized for release by:

8/7/2015 11:53:52 AM

Donnie Combs, Project Management Assistant I  
(713)690-4444

[donnie.combs@testamericainc.com](mailto:donnie.combs@testamericainc.com)

Designee for

Cathy Upton, Project Manager I  
(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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  
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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-115554-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Donnie Combs, for Cathy Upton

Name (printed)



Signature

8/6/2015

Date

Project Manager I

Official Title (printed)



# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115554-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115554-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115554-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-115554-6 MS/MSD failed the recovery criteria for the following analyte(s): Lead. Matrix interference is suspected.
R08C	Method 6010B: 600-115554-6 DU failed the RPD criteria for the following analyte: Lead.
R10B	Method 6010B: The following samples was diluted to bring the concentration of the target analytes within calibration range: 600-115554-1, 600-115554-2, 600-115554-3, 600-115554-4, 600-115554-5, 600-115554-6 and 600-115554-7. Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Job ID: 600-115554-1**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-115554-1**

### Comments

No additional comments.

### Receipt

The samples were received on 7/29/2015 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-115554-1	ECO-13 (0-0.5)	Solid	07/28/15 07:46	07/29/15 09:45
600-115554-2	ECO-14 (0-0.5)	Solid	07/28/15 08:15	07/29/15 09:45
600-115554-3	ECO-15 (0-0.5)	Solid	07/28/15 09:45	07/29/15 09:45
600-115554-4	ECO-16 (0-0.5)	Solid	07/28/15 10:00	07/29/15 09:45
600-115554-5	ECO-17 (0-0.5)	Solid	07/28/15 12:30	07/29/15 09:45
600-115554-6	ECO-18 (0-0.5)	Solid	07/28/15 13:26	07/29/15 09:45
600-115554-7	ECO-19 (0-0.5)	Solid	07/28/15 10:45	07/29/15 09:45

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

## Client Sample ID: ECO-13 (0-0.5)

Date Collected: 07/28/15 07:46

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-1

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			07/30/15 15:26	1
Percent Solids	75		1.0	1.0	%			07/30/15 15:26	1

## Client Sample ID: ECO-13 (0-0.5)

Date Collected: 07/28/15 07:46

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-1

Matrix: Solid

Percent Solids: 75.3

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19.4		6.09	1.33	mg/Kg	☼	07/31/15 17:33	08/04/15 14:56	5
Lead	180		6.09	1.28	mg/Kg	☼	07/31/15 17:33	08/04/15 17:15	10

## Client Sample ID: ECO-14 (0-0.5)

Date Collected: 07/28/15 08:15

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-2

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			07/30/15 15:26	1
Percent Solids	81		1.0	1.0	%			07/30/15 15:26	1

## Client Sample ID: ECO-14 (0-0.5)

Date Collected: 07/28/15 08:15

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-2

Matrix: Solid

Percent Solids: 80.7

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	22.7		5.85	1.27	mg/Kg	☼	07/31/15 17:33	08/04/15 14:59	5
Lead	2450		2.92	0.614	mg/Kg	☼	07/31/15 17:33	08/04/15 14:59	5

## Client Sample ID: ECO-15 (0-0.5)

Date Collected: 07/28/15 09:45

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-3

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	16		1.0	1.0	%			07/30/15 15:26	1
Percent Solids	84		1.0	1.0	%			07/30/15 15:26	1

## Client Sample ID: ECO-15 (0-0.5)

Date Collected: 07/28/15 09:45

Date Received: 07/29/15 09:45

## Lab Sample ID: 600-115554-3

Matrix: Solid

Percent Solids: 83.6

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.9		5.69	1.24	mg/Kg	☼	07/31/15 17:33	08/04/15 15:01	5
Lead	115		2.85	0.598	mg/Kg	☼	07/31/15 17:33	08/04/15 15:01	5

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Client Sample ID: ECO-16 (0-0.5)**

Date Collected: 07/28/15 10:00

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-4**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			07/30/15 15:26	1
Percent Solids	81		1.0	1.0	%			07/30/15 15:26	1

**Client Sample ID: ECO-16 (0-0.5)**

Date Collected: 07/28/15 10:00

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-4**

Matrix: Solid

Percent Solids: 81.0

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.9		5.99	1.31	mg/Kg	☼	07/31/15 17:33	08/04/15 15:03	5
Lead	219		3.00	0.629	mg/Kg	☼	07/31/15 17:33	08/04/15 15:03	5

**Client Sample ID: ECO-17 (0-0.5)**

Date Collected: 07/28/15 12:30

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-5**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			07/30/15 17:39	1
Percent Solids	79		1.0	1.0	%			07/30/15 17:39	1

**Client Sample ID: ECO-17 (0-0.5)**

Date Collected: 07/28/15 12:30

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-5**

Matrix: Solid

Percent Solids: 78.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	196		3.02	0.634	mg/Kg	☼	07/31/15 17:33	08/04/15 15:05	5

**Client Sample ID: ECO-18 (0-0.5)**

Date Collected: 07/28/15 13:26

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-6**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		1.0	1.0	%			07/30/15 17:39	1
Percent Solids	69		1.0	1.0	%			07/30/15 17:39	1

**Client Sample ID: ECO-18 (0-0.5)**

Date Collected: 07/28/15 13:26

Date Received: 07/29/15 09:45

**Lab Sample ID: 600-115554-6**

Matrix: Solid

Percent Solids: 68.9

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	218		6.91	1.45	mg/Kg	☼	07/31/15 17:33	08/04/15 15:08	10

TestAmerica Houston

## Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Client Sample ID: ECO-19 (0-0.5)**

**Date Collected: 07/28/15 10:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-7**

**Matrix: Solid**

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			07/30/15 17:39	1
Percent Solids	80		1.0	1.0	%			07/30/15 17:39	1

**Client Sample ID: ECO-19 (0-0.5)**

**Date Collected: 07/28/15 10:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-7**

**Matrix: Solid**

**Percent Solids: 80.2**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.8		6.00	1.31	mg/Kg	☼	07/31/15 17:33	08/04/15 15:17	5
Lead	1190		3.00	0.630	mg/Kg	☼	07/31/15 17:33	08/04/15 15:17	5

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
U	Analyte was not detected at or above the SDL.

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-168365/1-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/31/15 17:33	08/03/15 13:30	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/31/15 17:33	08/03/15 13:30	1

Lab Sample ID: MB 600-168365/1-A  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		07/31/15 17:33	08/04/15 14:43	1
Lead	0.105	U	0.500	0.105	mg/Kg		07/31/15 17:33	08/04/15 14:43	1

Lab Sample ID: LCSSRM 600-168365/2-A  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	113	105.7		mg/Kg		93.5	78.2 - 122.1
Lead	90.1	81.68		mg/Kg		90.7	81.7 - 118.8

Lab Sample ID: LCSSRM 600-168365/2-A  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	113	105.2		mg/Kg		93.1	78.2 - 122.1
Lead	90.1	83.37		mg/Kg		92.5	81.7 - 118.8

Lab Sample ID: 600-115541-A-6-C MS  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.23		46.7	51.31		mg/Kg		107	75 - 125
Lead	0.208	J	46.7	46.63		mg/Kg		99	75 - 125

Lab Sample ID: 600-115541-A-6-B DU  
Matrix: Solid  
Analysis Batch: 168450

Client Sample ID: Duplicate  
Prep Type: Total/NA  
Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	1.23		1.158		mg/Kg		6	20
Lead	0.208	J	0.1980	J	mg/Kg		5	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-115554-6 MS

Matrix: Solid

Analysis Batch: 168554

Client Sample ID: ECO-18 (0-0.5)

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic - DL	26.6		71.1	109.0		mg/Kg	☼	116	75 - 125
Lead - DL	218		71.1	685.7	N1	mg/Kg	☼	657	75 - 125

Lab Sample ID: 600-115554-6 MSD

Matrix: Solid

Analysis Batch: 168554

Client Sample ID: ECO-18 (0-0.5)

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic - DL	26.6		69.1	98.96		mg/Kg	☼	105	75 - 125	10	20
Lead - DL	218		69.1	802.3	N1	mg/Kg	☼	845	75 - 125	16	20

Lab Sample ID: 600-115554-6 DU

Matrix: Solid

Analysis Batch: 168554

Client Sample ID: ECO-18 (0-0.5)

Prep Type: Total/NA

Prep Batch: 168365

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic - DL	26.6		24.52		mg/Kg	☼	8	20
Lead - DL	218		157.0	F	mg/Kg	☼	33	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-115561-A-4 DU

Matrix: Solid

Analysis Batch: 168234

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	24		22		%		9	20
Percent Solids	76		78		%		3	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

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

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

## Metals

### Prep Batch: 168365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115541-A-6-B DU	Duplicate	Total/NA	Solid	3050B	
600-115541-A-6-C MS	Matrix Spike	Total/NA	Solid	3050B	
600-115554-1 - DL	ECO-13 (0-0.5)	Total/NA	Solid	3050B	
600-115554-2 - DL	ECO-14 (0-0.5)	Total/NA	Solid	3050B	
600-115554-3 - DL	ECO-15 (0-0.5)	Total/NA	Solid	3050B	
600-115554-4 - DL	ECO-16 (0-0.5)	Total/NA	Solid	3050B	
600-115554-5 - DL	ECO-17 (0-0.5)	Total/NA	Solid	3050B	
600-115554-6 - DL	ECO-18 (0-0.5)	Total/NA	Solid	3050B	
600-115554-6 DU - DL	ECO-18 (0-0.5)	Total/NA	Solid	3050B	
600-115554-6 MS - DL	ECO-18 (0-0.5)	Total/NA	Solid	3050B	
600-115554-6 MSD - DL	ECO-18 (0-0.5)	Total/NA	Solid	3050B	
600-115554-7	ECO-19 (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-168365/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-168365/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 168450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115541-A-6-B DU	Duplicate	Total/NA	Solid	6010B	168365
600-115541-A-6-C MS	Matrix Spike	Total/NA	Solid	6010B	168365
LCSSRM 600-168365/2-A	Lab Control Sample	Total/NA	Solid	6010B	168365
MB 600-168365/1-A	Method Blank	Total/NA	Solid	6010B	168365

### Analysis Batch: 168554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115554-1 - DL	ECO-13 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-1 - DL	ECO-13 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-2 - DL	ECO-14 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-3 - DL	ECO-15 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-4 - DL	ECO-16 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-5 - DL	ECO-17 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-6 - DL	ECO-18 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-6 DU - DL	ECO-18 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-6 MS - DL	ECO-18 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-6 MSD - DL	ECO-18 (0-0.5)	Total/NA	Solid	6010B	168365
600-115554-7	ECO-19 (0-0.5)	Total/NA	Solid	6010B	168365
LCSSRM 600-168365/2-A	Lab Control Sample	Total/NA	Solid	6010B	168365
MB 600-168365/1-A	Method Blank	Total/NA	Solid	6010B	168365

## General Chemistry

### Analysis Batch: 168234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115554-1	ECO-13 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-2	ECO-14 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-3	ECO-15 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-4	ECO-16 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-5	ECO-17 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-6	ECO-18 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-6 MS	ECO-18 (0-0.5)	Total/NA	Solid	Moisture	
600-115554-6 MSD	ECO-18 (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston



## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

### General Chemistry (Continued)

#### Analysis Batch: 168234 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115554-7	ECO-19 (0-0.5)	Total/NA	Solid	Moisture	
600-115561-A-4 DU	Duplicate	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Client Sample ID: ECO-13 (0-0.5)**

**Date Collected: 07/28/15 07:46**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 15:26	MJB	TAL HOU

**Client Sample ID: ECO-13 (0-0.5)**

**Date Collected: 07/28/15 07:46**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-1**

**Matrix: Solid**

**Percent Solids: 75.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.09 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.09 g	50 mL	168554	08/04/15 14:56	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.09 g	50 mL	168554	08/04/15 17:15	DCL	TAL HOU

**Client Sample ID: ECO-14 (0-0.5)**

**Date Collected: 07/28/15 08:15**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-2**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 15:26	MJB	TAL HOU

**Client Sample ID: ECO-14 (0-0.5)**

**Date Collected: 07/28/15 08:15**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-2**

**Matrix: Solid**

**Percent Solids: 80.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	168554	08/04/15 14:59	DCL	TAL HOU

**Client Sample ID: ECO-15 (0-0.5)**

**Date Collected: 07/28/15 09:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-3**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 15:26	MJB	TAL HOU

**Client Sample ID: ECO-15 (0-0.5)**

**Date Collected: 07/28/15 09:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-3**

**Matrix: Solid**

**Percent Solids: 83.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	168554	08/04/15 15:01	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Client Sample ID: ECO-16 (0-0.5)**

**Lab Sample ID: 600-115554-4**

**Date Collected: 07/28/15 10:00**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 15:26	MJB	TAL HOU

**Client Sample ID: ECO-16 (0-0.5)**

**Lab Sample ID: 600-115554-4**

**Date Collected: 07/28/15 10:00**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

**Percent Solids: 81.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.03 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.03 g	50 mL	168554	08/04/15 15:03	DCL	TAL HOU

**Client Sample ID: ECO-17 (0-0.5)**

**Lab Sample ID: 600-115554-5**

**Date Collected: 07/28/15 12:30**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 17:39	MJB	TAL HOU

**Client Sample ID: ECO-17 (0-0.5)**

**Lab Sample ID: 600-115554-5**

**Date Collected: 07/28/15 12:30**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

**Percent Solids: 78.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	168554	08/04/15 15:05	DCL	TAL HOU

**Client Sample ID: ECO-18 (0-0.5)**

**Lab Sample ID: 600-115554-6**

**Date Collected: 07/28/15 13:26**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 17:39	MJB	TAL HOU

**Client Sample ID: ECO-18 (0-0.5)**

**Lab Sample ID: 600-115554-6**

**Date Collected: 07/28/15 13:26**

**Matrix: Solid**

**Date Received: 07/29/15 09:45**

**Percent Solids: 68.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.05 g	50 mL	168554	08/04/15 15:08	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

**Client Sample ID: ECO-19 (0-0.5)**

**Date Collected: 07/28/15 10:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168234	07/30/15 17:39	MJB	TAL HOU

**Client Sample ID: ECO-19 (0-0.5)**

**Date Collected: 07/28/15 10:45**

**Date Received: 07/29/15 09:45**

**Lab Sample ID: 600-115554-7**

**Matrix: Solid**

**Percent Solids: 80.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	168365	07/31/15 17:33	NER	TAL HOU
Total/NA	Analysis	6010B		5	1.04 g	50 mL	168554	08/04/15 15:17	DCL	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115554-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

[illegible]



# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Golder Associates Inc. Address: 820 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site:		Sampler: E. White / A. Madole Lab P/N: Upton, Cathy L Phone: 314-304-1326 E-Mail: cathy.upton@testamericainc.com		COC No: 600-37871-12289.3 Pages: Page 3 of 12 Job #: 2 of 3	
Due Date Requested: TAT Requested (days): 5 day PO #: Exide1302086 WO #: Project #: 60005523 SOW#:		<b>Analysis Requested</b> Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
<b>Sample Identification</b> Duplicate-4 ECO-13 (0.5-2) ECO-13 (2-4) ECO-14 (0.5-2) ECO-14 (2-4) ECO-15 (0.5-2) ECO-15 (2-4) ECO-16 (0.5-2) ECO-16 (2-4) ECO-17 (0.5-2) ECO-17 (2-4)		Sample Date 7/28/15 Sample Time 0750 0752 0818 0820 0947 0950 1008 1010 1240 1250		Sample Type (C=comp, G=grab) C Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid	
Field Filtered Sample (Yes or No)		Matrix (Aqueous, Solid, Organic, Inorganic, Other)		Special Instructions/Note: * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only * Hld * Plat As only	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Method of Shipment: FedEx	
Relinquished by: [Signature]		Date/Time: 7-28-15 1003		Company: Golder	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact [Signature] Custody Seal No.:					



# Chain of Custody Record

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Goldier Associates Inc. Address: 820 South Main Street, Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: 636-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site:		Sample ID: E-White/A. Marlow Phone: 314-304-1326 Lab PM: Upton, Cathy L E-Mail: cathy.upton@testamerica.com		Carrier Tracking No(s): GOC No: 600-37671-12289.4 Page: 3 of 3 Job #:	
Due Date Requested: TAT Requested (days): 5 day PO #: Exide 1302086 WO #: 60006523 Project #: 60006523 SSOW#:		<b>Analysis Requested</b> Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
<b>Sample Identification</b> Sample ID: E0-18 (0.5-2) Sample ID: E0-18 (2-3.5) Sample ID: E0-19 (0.5-2) Sample ID: E0-19 (2-4) Sample ID: Friy Blank BW		Total Number of Containers: 4 Special Instructions/Note: * Hold * Pb only * Hold * Pb only * Hold * Pb only * Hold * Pb only			
Sample Date: 7/28/15 Sample Time: 1337 Sample Type (C=Comp, G=Grab): C Matrix (Wh=Water, S=solid, O=Organic, BT=Tissue, A=Air): Solid		Field Filtered Sample (Yes or No): 6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb 6010B - Moisture 6010B - (MOD) 6010B - As, Cd, Pb, Se, Sb			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment: Fedex			
Relinquished by: [Signature] Date/Time: 7-28-15 1603 Company: Golder		Received by: [Signature] Date/Time: 7-27-15 215 Company: [Blank]			
Relinquished by: [Signature] Date/Time: [Blank] Company: [Blank]		Received by: [Signature] Date/Time: [Blank] Company: [Blank]			
Relinquished by: [Signature] Date/Time: [Blank] Company: [Blank]		Received by: [Signature] Date/Time: [Blank] Company: [Blank]			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			

## Sample Receipt Checklist

Loc: 600

**115554**

Date/Time Received:

JOB NUMBER: \_\_\_\_\_

CLIENT: Gokker**15 JUL 29 9:45**

UNPACKED BY: \_\_\_\_\_

CARRIER/DRIVER: FSCustody Seal Present: ☒ YES ☐ NONumber of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
<u>RW</u>	Y / N	Y / N	<u>1.4</u>	<u>606</u>	<u>0</u>	<u>1.4</u>
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NOLABORATORY PRESERVATION OF SAMPLES REQUIRED: ☐ NO ☐ YESBase samples are > pH 12: ☐ YES ☐ NO Acid preserved are < pH 2: ☐ YES ☐ NO

pH paper Lot #: \_\_\_\_\_

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☐ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

ECO-18 CC says (2-3.5)  
label says (2-4)  
other info matched

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-115554-1

**Login Number: 115554**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Crafton, Tommie S**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	1.4
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.	False	IDs on containers do not match the COC. Logged in per COC.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040  
Tel: (713)690-4444

TestAmerica Job ID: 600-115590-1

Client Project/Site: Exide Recycling Center, Frisco TX

For:

Golder Associates Inc.  
820 South Main Street  
Suite 100  
St. Charles, Missouri 63301

Attn: Anne Faeth-Boyd



Authorized for release by:

8/7/2015 3:42:32 PM

Donnie Combs, Project Management Assistant I  
(713)690-4444

[donnie.combs@testamericainc.com](mailto:donnie.combs@testamericainc.com)

Designee for

Cathy Upton, Project Manager I  
(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-115590-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Donnie Combs, for Cathy Upton

Name (printed)



Signature

8/6/2015

Date

Project Manager I

Official Title (printed)



# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115590-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115590-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	8/6/2015
Project Name:	Exide Recycling Center, Frisco TX	Laboratory Job Number:	600-115590-1
Reviewer Name:	Donnie Combs, for Cathy Upton		

ER # <sup>1</sup>	Description
R07C	Method 6010B: 600-115590-10 MS failed the recovery criteria for the following analyte(s): Lead. Matrix interference is suspected due to the high concentration of this analyte in the parent sample
R10B	Method 6010B: The following samples was diluted to bring the target analytes within calibration range: 2015-C2L-06G (0-0.5) (600-115590-1), 2015-C2L-06H (0.5-1) (600-115590-4), 2015-C2L-06K (0-0.5) (600-115590-7), 2015-C2L-06J (0-0.5) (600-115590-10), D-11 F (0-0.5) (600-115590-13), E-15B (0.0-5) (600-115590-16), (600-115590-A-10-B DU) and (600-115590-A-10-C MS). Elevated reporting limits (RLs) are provided.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

**Matrix:** Solid  
**Method:** SW-846 6010B or 6010C  
**Prep Method:** SW-846 3050B  
**Date Analyzed:** 5/13/2015  
**Job #:** 600-109337  
**TALS Batch:** 162296  
**Units:** mg/Kg

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Thermo6500	0.119	0.200	0.220	0.4
Al	SPECTRO1	0.300	0.500	0.718	25
As	Thermo6500	0.218	0.500	0.480	1
B	SPECTRO1	0.386	0.600	0.698	20
Ba	Thermo6500	0.030	0.030	0.040	1
Be	Thermo6500	0.015	0.020	0.020	0.25
Ca	SPECTRO1	0.864	2.500	7.426	100
Cd	Thermo6500	0.026	0.050	0.045	0.25
Co	Thermo6500	0.068	0.100	0.105	0.5
Cr	Thermo6500	0.051	0.100	0.110	0.5
Cu	Thermo6500	0.174	0.500	0.425	0.5
Fe	Thermo6500	2.530	4.000	3.915	20
K	Thermo6500	11.000	12.000	13.360	100
Li	SPECTRO1	0.008	0.010	0.062	10
Mg	Thermo6500	1.920	3.000	3.705	100
Mn	Thermo6500	0.038	0.050	0.055	1.5
Mo	Thermo6500	0.136	0.350	0.325	0.5
Na	Thermo6500	0.886	2.400	2.520	100
Ni	Thermo6500	0.117	0.150	0.140	1
Pb	Thermo6500	0.105	0.200	0.195	0.5
Sb	Thermo6500	0.232	0.450	0.410	2.5
Se	Thermo6500	0.259	0.500	0.550	2
Si	SPECTRO1	0.117	0.270	6.900	10
Sn	SPECTRO1	0.087	0.150	0.117	1
Sr	SPECTRO1	0.003	0.005	0.042	0.25
Ti	Thermo6500	0.015	0.030	0.020	0.5
Tl	Thermo6500	0.277	0.700	0.580	1.5
V	Thermo6500	0.079	0.150	0.145	0.5
Zn	SPECTRO1	0.108	0.200	0.198	1.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Job ID: 600-115590-1**

**Laboratory: TestAmerica Houston**

### Narrative

**Job Narrative**  
**600-115590-1**

### Comments

No additional comments.

### Receipt

The samples were received on 7/30/2015 9:56 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-115590-1	2015-C2L-06G (0-0.5)	Solid	07/29/15 07:45	07/30/15 09:56
600-115590-4	2015-C2L-06H (0.5-1)	Solid	07/29/15 07:30	07/30/15 09:56
600-115590-7	2015-C2L-06K (0-0.5)	Solid	07/29/15 08:25	07/30/15 09:56
600-115590-10	2015-C2L-06J (0-0.5)	Solid	07/29/15 08:00	07/30/15 09:56
600-115590-13	D-11 F (0-0.5)	Solid	07/29/15 08:55	07/30/15 09:56
600-115590-16	E-15B (0.0-5)	Solid	07/29/15 15:15	07/30/15 09:56

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Client Sample ID: 2015-C2L-06G (0-0.5)**

Date Collected: 07/29/15 07:45

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-1**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	83		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: 2015-C2L-06G (0-0.5)**

Date Collected: 07/29/15 07:45

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-1**

Matrix: Solid

Percent Solids: 82.8

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	32.4		1.12	0.235	mg/Kg	☼	08/03/15 17:01	08/05/15 11:03	2

**Client Sample ID: 2015-C2L-06H (0.5-1)**

Date Collected: 07/29/15 07:30

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-4**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	80		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: 2015-C2L-06H (0.5-1)**

Date Collected: 07/29/15 07:30

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-4**

Matrix: Solid

Percent Solids: 79.6

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	149		1.20	0.251	mg/Kg	☼	08/03/15 17:01	08/05/15 11:06	2

**Client Sample ID: 2015-C2L-06K (0-0.5)**

Date Collected: 07/29/15 08:25

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-7**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.7		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	93		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: 2015-C2L-06K (0-0.5)**

Date Collected: 07/29/15 08:25

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-7**

Matrix: Solid

Percent Solids: 93.3

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1360		2.53	0.531	mg/Kg	☼	08/03/15 17:01	08/05/15 11:08	5

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Client Sample ID: 2015-C2L-06J (0-0.5)**

Date Collected: 07/29/15 08:00

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-10**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.4		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	99		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: 2015-C2L-06J (0-0.5)**

Date Collected: 07/29/15 08:00

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-10**

Matrix: Solid

Percent Solids: 98.6

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	2.55		1.91	0.248	mg/Kg	☼	08/03/15 17:01	08/04/15 14:33	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.5		4.78	1.04	mg/Kg	☼	08/03/15 17:01	08/05/15 11:10	5

**Client Sample ID: D-11 F (0-0.5)**

Date Collected: 07/29/15 08:55

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-13**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	79		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: D-11 F (0-0.5)**

Date Collected: 07/29/15 08:55

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-13**

Matrix: Solid

Percent Solids: 79.5

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.98		5.99	1.31	mg/Kg	☼	08/03/15 17:01	08/05/15 11:17	5

**Client Sample ID: E-15B (0.0-5)**

Date Collected: 07/29/15 15:15

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-16**

Matrix: Solid

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14		1.0	1.0	%			07/31/15 10:09	1
Percent Solids	86		1.0	1.0	%			07/31/15 10:09	1

**Client Sample ID: E-15B (0.0-5)**

Date Collected: 07/29/15 15:15

Date Received: 07/30/15 09:56

**Lab Sample ID: 600-115590-16**

Matrix: Solid

Percent Solids: 86.3

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.5		11.4	2.48	mg/Kg	☼	08/03/15 17:01	08/05/15 11:19	10

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

### Qualifiers

#### Metals

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.
U	Analyte was not detected at or above the SDL.

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-168496/1-A  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		08/03/15 17:01	08/04/15 14:15	1
Lead	0.105	U	0.500	0.105	mg/Kg		08/03/15 17:01	08/04/15 14:15	1
Selenium	0.259	U	2.00	0.259	mg/Kg		08/03/15 17:01	08/04/15 14:15	1

Lab Sample ID: LCSSRM 600-168496/2-A  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	113	108.6		mg/Kg		96.1	78.2 - 122.1
Lead	90.1	90.05		mg/Kg		99.9	81.7 - 118.8
Selenium	156	146.9		mg/Kg		94.2	77.6 - 121.8

Lab Sample ID: 600-115590-10 MS  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: 2015-C2L-06J (0-0.5)  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	718		47.0	652.7	4	mg/Kg	☼	-139	75 - 125
Selenium	2.55		47.0	50.10		mg/Kg	☼	101	75 - 125

Lab Sample ID: 600-115625-A-7-C MS  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.10		49.5	50.77		mg/Kg	☼	98	75 - 125
Lead	7.90		49.5	59.33		mg/Kg	☼	104	75 - 125
Selenium	0.256	U	49.5	47.77		mg/Kg	☼	97	75 - 125

Lab Sample ID: 600-115625-A-7-D MSD  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	2.10		50.4	50.59		mg/Kg	☼	96	75 - 125	0	20
Lead	7.90		50.4	60.38		mg/Kg	☼	104	75 - 125	2	20
Selenium	0.256	U	50.4	47.88		mg/Kg	☼	95	75 - 125	0	20

Lab Sample ID: 600-115590-10 DU  
Matrix: Solid  
Analysis Batch: 168554

Client Sample ID: 2015-C2L-06J (0-0.5)  
Prep Type: Total/NA  
Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	718		611.7		mg/Kg	☼	16	20
Selenium	2.55		2.153		mg/Kg	☼	17	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-115590-10 MS

Matrix: Solid

Analysis Batch: 168647

Client Sample ID: 2015-C2L-06J (0-0.5)

Prep Type: Total/NA

Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic - DL	13.5		47.0	63.08		mg/Kg	☼	106	75 - 125
Lead - DL	701		47.0	636.9	4	mg/Kg	☼	-136	75 - 125

Lab Sample ID: 600-115590-10 DU

Matrix: Solid

Analysis Batch: 168647

Client Sample ID: 2015-C2L-06J (0-0.5)

Prep Type: Total/NA

Prep Batch: 168496

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic - DL	13.5		15.35		mg/Kg	☼	13	20
Lead - DL	701		599.1		mg/Kg	☼	16	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-115590-13 DU

Matrix: Solid

Analysis Batch: 168295

Client Sample ID: D-11 F (0-0.5)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	21		20		%		2	20
Percent Solids	79		80		%		0.6	20

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

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

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B
Selenium	2.00	0.259	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

## Metals

### Prep Batch: 168496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115590-1 - DL	2015-C2L-06G (0-0.5)	Total/NA	Solid	3050B	
600-115590-4 - DL	2015-C2L-06H (0.5-1)	Total/NA	Solid	3050B	
600-115590-7 - DL	2015-C2L-06K (0-0.5)	Total/NA	Solid	3050B	
600-115590-10	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-10 - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-10 DU - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-10 DU	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-10 MS	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-10 MS - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	3050B	
600-115590-13 - DL	D-11 F (0-0.5)	Total/NA	Solid	3050B	
600-115590-16 - DL	E-15B (0.0-5)	Total/NA	Solid	3050B	
600-115625-A-7-C MS	Matrix Spike	Total/NA	Solid	3050B	
600-115625-A-7-D MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	
LCSSRM 600-168496/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-168496/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 168554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115590-10	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-10 DU	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-10 MS	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115625-A-7-C MS	Matrix Spike	Total/NA	Solid	6010B	168496
600-115625-A-7-D MSD	Matrix Spike Duplicate	Total/NA	Solid	6010B	168496
LCSSRM 600-168496/2-A	Lab Control Sample	Total/NA	Solid	6010B	168496
MB 600-168496/1-A	Method Blank	Total/NA	Solid	6010B	168496

### Analysis Batch: 168647

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115590-1 - DL	2015-C2L-06G (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-4 - DL	2015-C2L-06H (0.5-1)	Total/NA	Solid	6010B	168496
600-115590-7 - DL	2015-C2L-06K (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-10 - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-10 DU - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-10 MS - DL	2015-C2L-06J (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-13 - DL	D-11 F (0-0.5)	Total/NA	Solid	6010B	168496
600-115590-16 - DL	E-15B (0.0-5)	Total/NA	Solid	6010B	168496

## General Chemistry

### Analysis Batch: 168295

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-115590-1	2015-C2L-06G (0-0.5)	Total/NA	Solid	Moisture	
600-115590-4	2015-C2L-06H (0.5-1)	Total/NA	Solid	Moisture	
600-115590-7	2015-C2L-06K (0-0.5)	Total/NA	Solid	Moisture	
600-115590-10	2015-C2L-06J (0-0.5)	Total/NA	Solid	Moisture	
600-115590-13	D-11 F (0-0.5)	Total/NA	Solid	Moisture	
600-115590-13 DU	D-11 F (0-0.5)	Total/NA	Solid	Moisture	
600-115590-16	E-15B (0.0-5)	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Client Sample ID: 2015-C2L-06G (0-0.5)**

**Date Collected: 07/29/15 07:45**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-1**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06G (0-0.5)**

**Date Collected: 07/29/15 07:45**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-1**

**Matrix: Solid**

**Percent Solids: 82.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.08 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.08 g	50 mL	168647	08/05/15 11:03	DCL	TAL HOU

**Client Sample ID: 2015-C2L-06H (0.5-1)**

**Date Collected: 07/29/15 07:30**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-4**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06H (0.5-1)**

**Date Collected: 07/29/15 07:30**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-4**

**Matrix: Solid**

**Percent Solids: 79.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	2	1.05 g	50 mL	168647	08/05/15 11:06	DCL	TAL HOU

**Client Sample ID: 2015-C2L-06K (0-0.5)**

**Date Collected: 07/29/15 08:25**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-7**

**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06K (0-0.5)**

**Date Collected: 07/29/15 08:25**

**Date Received: 07/30/15 09:56**

**Lab Sample ID: 600-115590-7**

**Matrix: Solid**

**Percent Solids: 93.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.06 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	168647	08/05/15 11:08	DCL	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Client Sample ID: 2015-C2L-06J (0-0.5)**

**Lab Sample ID: 600-115590-10**

Date Collected: 07/29/15 08:00

Matrix: Solid

Date Received: 07/30/15 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: 2015-C2L-06J (0-0.5)**

**Lab Sample ID: 600-115590-10**

Date Collected: 07/29/15 08:00

Matrix: Solid

Date Received: 07/30/15 09:56

Percent Solids: 98.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	168554	08/04/15 14:33	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.06 g	50 mL	168647	08/05/15 11:10	DCL	TAL HOU

**Client Sample ID: D-11 F (0-0.5)**

**Lab Sample ID: 600-115590-13**

Date Collected: 07/29/15 08:55

Matrix: Solid

Date Received: 07/30/15 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: D-11 F (0-0.5)**

**Lab Sample ID: 600-115590-13**

Date Collected: 07/29/15 08:55

Matrix: Solid

Date Received: 07/30/15 09:56

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.05 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	5	1.05 g	50 mL	168647	08/05/15 11:17	DCL	TAL HOU

**Client Sample ID: E-15B (0.0-5)**

**Lab Sample ID: 600-115590-16**

Date Collected: 07/29/15 15:15

Matrix: Solid

Date Received: 07/30/15 09:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			168295	07/31/15 10:09	MJB	TAL HOU

**Client Sample ID: E-15B (0.0-5)**

**Lab Sample ID: 600-115590-16**

Date Collected: 07/29/15 15:15

Matrix: Solid

Date Received: 07/30/15 09:56

Percent Solids: 86.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.02 g	50 mL	168496	08/03/15 17:01	NER	TAL HOU
Total/NA	Analysis	6010B	DL	10	1.02 g	50 mL	168647	08/05/15 11:19	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

**Laboratory References:**

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

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# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX

TestAmerica Job ID: 600-115590-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# Chain of Custody Record

<b>Client Information</b> Client Contact: Anne Faeth-Boyd Company: Goldar Associates Inc. Address: 820 South Main Street Suite 100 City: St. Charles State, Zip: MO, 63301 Phone: (636)-724-9191 Email: afaeth@golder.com Project Name: Exide Recycling Center, Frisco TX Site:		<b>Sample Information</b> Sample: E. White / A. Marlow Lab PM: Upton, Cathy L. Phone: (636)-724-9191 E-Mail: cathy.upton@testamericainc.com		Carrier Tracking No(s): 600-37671-12289.5 Page: 5 of 12 Page 5 of 12 Job #: 1 of 2	
<b>Due Date Requested:</b> TAT Requested (days): 5 day PO #: Exide1302086 WO #: 60006523 Project #: 60006523 SSOW#:		<b>Analysis Requested</b> Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsH2O2 P - Na2SO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify): Other:			
<b>Sample Identification</b> Sample ID: 2015-02L-006 (0.0.5) Sample ID: 2015-02L-006 (0.5-2) Sample ID: 2015-02L-006 (2-4) Sample ID: 2015-02L-006 (0.5-1) Sample ID: 2015-02L-006 (1-2.5) Sample ID: 2015-02L-006 (2.5-4) Sample ID: 2015-02L-006 (2.5-4) MS Sample ID: 2015-02L-006 (2.5-4) M12 Sample ID: 2015-02L-006 (0.0.5) Sample ID: 2015-02L-006 (0.5-2) Sample ID: 2015-02L-006 (2-4)		<b>Sample Date</b> 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15 7/29/15		<b>Sample Time</b> 0745 0747 0748 0730 0734 0737 0737 0757 0825 0827 0830	
<b>Sample Type</b> (C=Comp, G=Grab) C Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid		<b>Matrix</b> (W=Water, S=Solid, O=Organic, E=Elemental, A=As) Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid Solid		<b>Field Filled Sample (Yes or No)</b> X X X X X X X X X X X	
<b>6010B, Moisture</b> X X X X X X X X X X X		<b>6010B - (MOD) 6010B, As, Cd, Pb, Se, Sb</b> X X X X X X X X X X X		<b>600-115590 Chain of Custody</b> X X X X X X X X X X X	
<b>Special Instructions/Note:</b> Pb only Pb only & Hdd Pb only & Hdd Pb only Pb only & Hdd Pb only & Hdd Pb only & Hdd Pb only & Hdd Pb only Pb only & Hdd Pb only & Hdd Pb only & Hdd		<b>Special Instructions/Note:</b> Pb only Pb only & Hdd Pb only & Hdd Pb only Pb only & Hdd Pb only & Hdd Pb only & Hdd Pb only & Hdd Pb only Pb only & Hdd Pb only & Hdd Pb only & Hdd			
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months					
<b>Special Instructions/QC Requirements:</b>					
<b>Empty Kit Relinquished by:</b> Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		<b>Date:</b> 7-29-15 7-29-15 7-29-15		<b>Method of Shipment:</b> FedEx Receiver: [Signature] Received by: [Signature] Received by: [Signature]	
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		<b>Company:</b> Company: Goldar Associates Inc. Company: Goldar Associates Inc. Company: Goldar Associates Inc.			
<b>Custody Seal No.:</b> Yes No		<b>Custody Seal No.:</b> Yes No			

# Chain of Custody Record

<b>Client Information</b>		Lab PM: Upton, Cathy L		Carrier Tracking No(s)		COC No: 600-36678-12035.1	
Company: Golden Associates Inc.		Phone: 314-304-1326		E-Mail: cathy.upton@testamerica.com		Page: 2 of 2	
Address: 820 South Main Street Suite 100		City: St. Charles		State, Zip: MO, 63301		Job #	
Phone: 636-724-9191		Email: afaeth@golder.com		Project Name: Exide Recycling Center, Frisco TX		Site: Exide Recycling Center, Frisco TX	
Due Date Requested: TAT Requested (days): 5 Days		PO #		Purchase Order Reference: 636-1302086		Project #	
WO #		Project #		SSOW #		SSOW #	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
2015-C2L-D6J (0-0.5)		7/29/15		0800		Solid	
2015-C2L-D6J (0.5-2)		7/29/15		0803		Solid	
2015-C2L-D6J (2-4)		7/29/15		0805		Solid	
D-11F (0-0.5)		7/29/15		0855		Solid	
D-11F (0.5-2)		7/29/15		0857		Solid	
D-11F (2-4)		7/29/15		0900		Solid	
E-15B (0-0.5)		7/29/15		1515		Solid	
E-15B (0.5-2)		7/29/15		1517		Solid	
E-15B (2-4)		7/29/15		1520		Solid	
Duplicate-5		7/29/15		1520		Solid	
Possible Hazard Identification		Polson B		Polson B		Radiological	
Non-Hazard		Flammable		Skin Irritant		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Date/Time: 7/29/15 1858		Company: Golder		Relinquished by:	
Relinquished by:		Date/Time:		Company:		Relinquished by:	
Custody Seals Intact: Yes No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Method of Shipment: FedEx	

## Sample Receipt Checklist

Date/Time received: \_\_\_\_\_

JOB NUMBER: \_\_\_\_\_

CLIENT: Golden

UNPACKED BY: \_\_\_\_\_

CARRIER/DRIVER: FS

Custody Seal Present

☒ YES☐ NONumber of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
<u>RW</u>	<u>Y / N</u>	<u>Y / N</u>	<u>3.1</u>	<u>606</u>	<u>0</u>	<u>3.1</u>
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☒ YES ☐ NOLABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YESBase samples are > pH 12. ☐ YES ☐ NOAcid preserved are < pH 2: ☐ YES ☐ NO

pH paper Lot #: \_\_\_\_\_

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

YES NO

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?

COMMENTS:

7/31/15

[Signature]

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-115590-1

**Login Number: 115590**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Jackson, Falynn E**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	3.1
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.





## Data Usability Summary Test America Work Orders: 92036-1

<b>Sample Dates:</b>	May 13, 2014	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 92036-1		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

### 1.0 TESTS/ METHODS

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)  
Percent moisture/percent solids (general chemistry)

### 2.0 SAMPLES

2 soil samples and 1 equipment rinsate blank. See Table 1 for a complete cross-referenced listing of samples.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.

The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures
- Results Reporting Procedures
- Laboratory and Field QC Blanks



- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Organics: 60-140% spike recovery (and not less than 10% or data is rejected) and  $\pm$  MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.
- Aqueous Samples:  $\pm$  2x MQL difference (if either result is less than 5x MQL) or 30% RPD (for field duplicates) as recommended in TRRP-13

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or ‘see’ in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or ‘see’ in a given sample. For TRRP, non-detects



are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report.

## USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 <sup>Toi</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. As needed per TRRP, the unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria.
2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high



can be used; however, the reported concentration may be high. Detects that are estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.

Reviewer: Jie Xu 8/26/15

## **QUALITY CONTROL PARAMETERS AND OUTCOMES**

### **Data Completeness**

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format.

### **Chain-of-Custody**

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, with the following exceptions:

- A number of deeper interval samples were archived at the laboratory pending results of shallow interval samples.

### **Sample Condition**

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation:

- For 600-92036-1, the temperatures of the coolers at receipt were 2.2°C.

### **Field Procedures**

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.

### **Results Reporting Procedures**

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.

Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-



flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

MQLs- The LORPs have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte.

MDLs- According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

### **Laboratory Blanks**

Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. No analytes were detected in the laboratory blanks.

### **Field QC Blanks**

One equipment rinsate blank was collected to document sufficient field decontamination procedures for soil sampling devices. Results for samples collected with a contaminated rinsate blank may be affected by field contamination. No analytes were detected in the equipment rinsate blank.

### **Laboratory Control Sample**

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects.

### **Matrix Spike Recovery**

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using designated samples from the site as shown in Table 1. The lab also selected unrelated samples as MS/MSDs for several job packages. In these cases, MS/MSD recoveries were not evaluated. In cases where the spiking amount is sufficiently less than the amount in the unspiked parent sample, the data were considered inconclusive and the MS/MSD recovery check was waived.



## Data Usability Summary

### Test America Work Orders: 92036-1

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
164854	600-92036-1	2014-SCC-16 (0-0.5)	Lead	358	59.2, 61.0	413	-21	J

NA – Not available.

Samples qualified only if both MS and MSD were outside of criteria of approximately 70-130%

In all cases where the spike amount is less than four times the result in the unspiked parent sample, the data are considered inconclusive and the MS/MSD recovery check is waived.

### Surrogate Recovery

No surrogate recovery data was requested in the lab report.

### Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals analytical batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes one MSD and MD for Total Metals.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix.

### Field Duplicate Precision

No field duplicates were collected with the samples.

### Instrument Tuning

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.

### Instrument Calibration

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations.



### **Instrument Performance**

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists.

### **Internal Standards**

According to the LRC, area counts and retention times were within method requirements.



**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Sample Date	Matrix	Comments
600-92036-1	2014-SCC-16 (0-0.5)	5/13/2014	Soil	
600-92036-3	2014-CUFT-19 (0-0.5)	5/13/2014	Soil	
600-92036-5	rinse blank-spoon	5/13/2014	Water	

**TABLE 2 - QUALIFIED DATA**

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifer	Explanation
600-92036-1	2014-SCC-16 (0-0.5)	Lead	358	mg/Kg	J	MS/MSD recoveries and MSD/MD RPDs outside of criteria

Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data; The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data; The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected; Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data; The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

U Not detected; The analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data; The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low

**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Lab Package	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added

<sup>a</sup> RPD = ((SR - DR) \* 200) / (SR + DR)

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.

NC - Not calculated if one or both results were non-detect

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040  
Tel: (713)690-4444

TestAmerica Job ID: 600-92036-1

Client Project/Site: Exide Recycling Center, Frisco TX Projec

For:

Golder Associates Inc.  
500 Century Plaza Drive  
Suite 190  
Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

5/19/2014 11:32:06 AM

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### LINKS

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*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.*

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-92036-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

5/16/2014

Date

Project Management Asst II

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/16/2014
Project Name:	Exide Recycling Center, Frisco TX Projec	Laboratory Job Number:	600-92036-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/16/2014
Project Name:	Exide Recycling Center, Frisco TX Projec	Laboratory Job Number:	600-92036-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/16/2014
Project Name:	Exide Recycling Center, Frisco TX Projec	Laboratory Job Number:	600-92036-1
Reviewer Name:	Dean A Joiner		

ER # <sup>1</sup>	Description
R07C	Method 6010B: Due to the high concentration of Lead, samples 600-92036-1 MS/MSD could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) was within acceptance limits.
R07D	Method 6010B: Due to the high concentration of Lead, samples 600-92036-1 MS/MSD could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) was within acceptance limits.
R08C	Method 6010B: 600-92036-1 DU failed the RPD criteria for the following analyte(s): Lead. Non-homogeneity is suspected.
S09A	Method 6010B: The serial dilution performed for the following sample(s) associated with batch 134378 was outside control limits for lead: 600-92036-1 SD.
R01A	The following sample(s) was placed on HOLD by the client on 05/14/14: 2014-CUFT-19 (0.5-1) (600-92036-4), 2014-SCC-16 (0.5-1) (600-92036-2). See attached email.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

### Detection Check Standard

Matrix: Soil  
Method: 6010B  
Preparation: 3050  
Date Analyzed: 3/28/2014  
Date Prepared: 3/27/2014  
Instrument: Thermo 6500  
TALS Batches: 130577p, 130672  
Prep/Reagent Factor = 50  
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.36	25
Antimony	0.231553	0.45	0.31	2.5
Arsenic	0.217923	0.5	0.57	1
Barium	0.011322	0.03	0.03	1
Beryllium	0.014513	0.02	0.02	0.25
Boron	0.385535	0.6	0.49	20
Cadmium	0.025642	0.05	0.045	0.25
Calcium	0.86399	1.5	2.07	100
Chromium	0.050606	0.1	0.11	0.5
Cobalt	0.067622	0.1	0.105	0.5
Copper	0.173703	0.5	0.535	0.5
Iron	2.534007	4	4.035	20
Lead	0.104832	0.2	0.18	0.5
Selenium	0.258884	0.5	0.505	2
Manganese	0.038111	0.05	0.05	1.5
Molybdenum	0.136448	0.35	0.325	0.5
Nickel	0.116599	0.15	0.145	1
Silver	0.118848	0.2	0.22	0.5
Sodium	0.885548	2.4	2.13	100
Thallium	0.276988	0.7	0.615	1.5
Tin	0.08729	0.15	0.13	1
Titanium	0.014529	0.03	0.035	0.5
Vanadium	0.079068	0.15	0.165	0.5
Zinc	0.108432	0.2	0.285	1.5

### Detection Check Standard

Matrix: Water  
Method: 200.7/6010  
Preparation: 200.7P/3010  
Date Analyzed: 3/28/2014  
Date Prepared: 3/27/2014  
Instrument: Thermo6500  
TALs Batches: 130582p, 130672  
Units: mg/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.006	0.02	0.0029	0.5
Antimony	0.0063	0.01	0.012	0.05
Arsenic	0.0033	0.01	0.0083	0.01
Barium	0.0022	0.005	0.0051	0.02
Beryllium	0.00134	0.002	0.0039	0.005
Boron	0.0077	0.02	0.0201	0.2
Cadmium	0.00073	0.001	0.001	0.005
Calcium	0.022	0.05	0.042	1
Chromium	0.0016	0.002	0.0035	0.01
Cobalt	0.00063	0.001	0.001	0.01
Copper	0.0014	0.002	0.0021	0.01
Iron	0.087	0.1	0.1009	0.4
Lithium	0.0024	0.005	0.0045	0.2
Lead	0.0029	0.005	0.004	0.01
Selenium	0.0042	0.01	0.01	0.04
Manganese	0.00084	0.002	0.0021	0.01
Molybdenum	0.0027	0.005	0.005	0.01
Nickel	0.00179	0.005	0.0047	0.01
Silver	0.0012	0.0025	0.0024	0.01
Silicon	0.00779	0.02	0.016	0.2
Sodium	0.02	0.05	0.0469	1
Strontium	0.0005	0.001	0.001	0.005
Thallium	0.0078	0.02	0.0205	0.03
Tin	0.0028	0.005	0.0046	0.01
Titanium	0.0011	0.002	0.0019	0.01
Vanadium	0.0017	0.002	0.0046	0.01
Zinc	0.0022	0.005	0.0049	0.01

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-92036-1

**Job ID: 600-92036-1**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-92036-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/14/2014 7:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2° C.

Except:

The following sample(s) was placed on HOLD by the client on 05/14/14: 2014-CUFT-19 (0.5-1) (600-92036-4), 2014-SCC-16 (0.5-1) (600-92036-2). See attached email.

## Method Summary

Client: Golder Associates Inc.

TestAmerica Job ID: 600-92036-1

Project/Site: Exide Recycling Center, Frisco TX Projec

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.

TestAmerica Job ID: 600-92036-1

Project/Site: Exide Recycling Center, Frisco TX Projec

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-92036-1	2014-SCC-16 (0-0.5)	Solid	05/13/14 17:56	05/14/14 07:00
600-92036-3	2014-CUFT-19 (0-0.5)	Solid	05/13/14 18:32	05/14/14 07:00
600-92036-5	rinse blank- spoon	Water	05/13/14 19:03	05/14/14 07:00



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Project

TestAmerica Job ID: 600-92036-1

## Client Sample ID: 2014-SCC-16 (0-0.5)

Date Collected: 05/13/14 17:56

Date Received: 05/14/14 07:00

## Lab Sample ID: 600-92036-1

Matrix: Solid

Percent Solids: 80.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	358		0.604	0.127	mg/Kg	☆	05/14/14 12:28	05/14/14 17:09	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			05/14/14 12:53	1
Percent Solids	80		1.0	1.0	%			05/14/14 12:53	1

## Client Sample ID: 2014-CUFT-19 (0-0.5)

Date Collected: 05/13/14 18:32

Date Received: 05/14/14 07:00

## Lab Sample ID: 600-92036-3

Matrix: Solid

Percent Solids: 88.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	232		0.561	0.118	mg/Kg	☆	05/14/14 12:28	05/14/14 17:17	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12		1.0	1.0	%			05/14/14 12:53	1
Percent Solids	88		1.0	1.0	%			05/14/14 12:53	1

## Client Sample ID: rinse blank- spoon

Date Collected: 05/13/14 19:03

Date Received: 05/14/14 07:00

## Lab Sample ID: 600-92036-5

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00290	U	0.0100	0.00290	mg/L		05/15/14 08:30	05/15/14 15:37	1

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Project

TestAmerica Job ID: 600-92036-1

### Qualifiers

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
F	Duplicate RPD exceeds the control limit
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.
N2	RPD of the MS and MSD 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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-92036-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-134378/1-A

Matrix: Solid

Analysis Batch: 134441

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 134378

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.105	U	0.500	0.105	mg/Kg		05/14/14 12:28	05/14/14 16:59	1

Lab Sample ID: LCSSRM 600-134378/2-A

Matrix: Solid

Analysis Batch: 134441

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 134378

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	115	107.4		mg/Kg		93.4	81.8 - 119.1

Lab Sample ID: 600-92036-1 MS

Matrix: Solid

Analysis Batch: 134441

Client Sample ID: 2014-SCC-16 (0-0.5)

Prep Type: Total/NA

Prep Batch: 134378

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	358		59.2	602.3	4	mg/Kg	☼	413	75 - 125

Lab Sample ID: 600-92036-1 MSD

Matrix: Solid

Analysis Batch: 134441

Client Sample ID: 2014-SCC-16 (0-0.5)

Prep Type: Total/NA

Prep Batch: 134378

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	358		61.0	344.9	4 N2	mg/Kg	☼	-21	75 - 125	54	20

Lab Sample ID: 600-92036-1 DU

Matrix: Solid

Analysis Batch: 134441

Client Sample ID: 2014-SCC-16 (0-0.5)

Prep Type: Total/NA

Prep Batch: 134378

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	358		977.2	F	mg/Kg	☼	93	20

Lab Sample ID: MB 600-134453/1-A

Matrix: Water

Analysis Batch: 134493

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 134453

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00290	U	0.0100	0.00290	mg/L		05/15/14 08:30	05/15/14 15:27	1

Lab Sample ID: LCS 600-134453/2-A

Matrix: Water

Analysis Batch: 134493

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 134453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.045		mg/L		105	80 - 120

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-92036-1

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

Lab Sample ID: 600-91988-B-1-C MS

Matrix: Water

Analysis Batch: 134493

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 134453

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.00290	U	1.00	0.9771		mg/L		98	75 - 125

Lab Sample ID: 600-91988-B-1-B DU

Matrix: Water

Analysis Batch: 134493

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 134453

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead	0.00290	U	0.00290	U	mg/L		NC	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-91959-F-1 DU

Matrix: Solid

Analysis Batch: 134381

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	57		57		%		0.1	20
Percent Solids	43		43		%		0.1	20

## Unadjusted Detection Limits

Client: Golder Associates Inc.

TestAmerica Job ID: 600-92036-1

Project/Site: Exide Recycling Center, Frisco TX Projec

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

Analyte	MQL	MDL	Units	Method
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Projec

TestAmerica Job ID: 600-92036-1

## Metals

### Prep Batch: 134378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-92036-1	2014-SCC-16 (0-0.5)	Total/NA	Solid	3050B	
600-92036-1 DU	2014-SCC-16 (0-0.5)	Total/NA	Solid	3050B	
600-92036-1 MS	2014-SCC-16 (0-0.5)	Total/NA	Solid	3050B	
600-92036-1 MSD	2014-SCC-16 (0-0.5)	Total/NA	Solid	3050B	
600-92036-3	2014-CUFT-19 (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-134378/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-134378/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 134441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-92036-1	2014-SCC-16 (0-0.5)	Total/NA	Solid	6010B	134378
600-92036-1 DU	2014-SCC-16 (0-0.5)	Total/NA	Solid	6010B	134378
600-92036-1 MS	2014-SCC-16 (0-0.5)	Total/NA	Solid	6010B	134378
600-92036-1 MSD	2014-SCC-16 (0-0.5)	Total/NA	Solid	6010B	134378
600-92036-3	2014-CUFT-19 (0-0.5)	Total/NA	Solid	6010B	134378
LCSSRM 600-134378/2-A	Lab Control Sample	Total/NA	Solid	6010B	134378
MB 600-134378/1-A	Method Blank	Total/NA	Solid	6010B	134378

### Prep Batch: 134453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-91988-B-1-B DU	Duplicate	Total/NA	Water	3010A	
600-91988-B-1-C MS	Matrix Spike	Total/NA	Water	3010A	
600-92036-5	rinse blank- spoon	Total/NA	Water	3010A	
LCS 600-134453/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-134453/1-A	Method Blank	Total/NA	Water	3010A	

### Analysis Batch: 134493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-91988-B-1-B DU	Duplicate	Total/NA	Water	6010B	134453
600-91988-B-1-C MS	Matrix Spike	Total/NA	Water	6010B	134453
600-92036-5	rinse blank- spoon	Total/NA	Water	6010B	134453
LCS 600-134453/2-A	Lab Control Sample	Total/NA	Water	6010B	134453
MB 600-134453/1-A	Method Blank	Total/NA	Water	6010B	134453

## General Chemistry

### Analysis Batch: 134381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-91959-F-1 DU	Duplicate	Total/NA	Solid	Moisture	
600-92036-1	2014-SCC-16 (0-0.5)	Total/NA	Solid	Moisture	
600-92036-3	2014-CUFT-19 (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston

## Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center, Frisco TX Project

TestAmerica Job ID: 600-92036-1

**Client Sample ID: 2014-SCC-16 (0-0.5)**

**Date Collected: 05/13/14 17:56**

**Date Received: 05/14/14 07:00**

**Lab Sample ID: 600-92036-1**

**Matrix: Solid**

**Percent Solids: 80.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	134378	05/14/14 12:28	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	134441	05/14/14 17:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			134381	05/14/14 12:53	AYS	TAL HOU

**Client Sample ID: 2014-CUFT-19 (0-0.5)**

**Date Collected: 05/13/14 18:32**

**Date Received: 05/14/14 07:00**

**Lab Sample ID: 600-92036-3**

**Matrix: Solid**

**Percent Solids: 88.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	134378	05/14/14 12:28	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	134441	05/14/14 17:17	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			134381	05/14/14 12:53	AYS	TAL HOU

**Client Sample ID: rinse blank- spoon**

**Date Collected: 05/13/14 19:03**

**Date Received: 05/14/14 07:00**

**Lab Sample ID: 600-92036-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	134453	05/15/14 08:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	134493	05/15/14 15:37	DCL	TAL HOU

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



## Certification Summary

Client: Golder Associates Inc.

TestAmerica Job ID: 600-92036-1

Project/Site: Exide Recycling Center, Frisco TX Projec

### Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-14

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt \_\_\_\_\_

Drinking Water? Yes ☐ No ☒

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client <b>Golden Associates</b>		Project Manager <b>Christina H. Singhbotham</b>		Date <b>5-13-14</b>	Chain of Custody Number <b>278310</b>
Address <b>500 Century Plaza</b>		Telephone Number (Area Code)/Fax Number <b>281-821-6868</b>		Lab Number	
City <b>Houston</b>	State <b>TX</b>	Zip Code <b>77073</b>	Site Contact	Lab Contact	Page <b>1</b> of <b>1</b>
Project Name and Location (State) <b>Exide F5360, TX</b>		Carrier/Waybill Number <b>1302086</b>		Analysis (Attach list if more space is needed)	
Contract/Purchase Order/Quote No.				Special Instructions/Conditions of Receipt	


  

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix			Containers & Preservatives						Metals	Gold	
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc/NaOH
2014-566-16 (0-0.5)	5-13-14	1756				X								
2014-566-16 (0.5-1)		1758				X								
2014-CUFT-18 (0-0.5)		1832				X								
2014-CUFT-18 (0.5-1)		1834				X								
15056 blank - 3000		1903	X											

Possible Hazard Identification	Sample Disposal	QC Requirements (Specify)
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input checked="" type="checkbox"/> Archive For <b>18 Months</b> (fee may be assessed if samples are retained longer than 1 month)	1. Received By <b>W. J. Smith</b> Date <b>5-13-14</b> Time <b>1450</b> 2. Received By <b>dp</b> Date <b>05/14/14</b> Time <b>0700</b> 3. Received By <b>dp</b> Date <b>05/14/14</b> Time <b>0700</b>



600-92036 Chain of Custody

## Sample Receipt Checklist

UNPACKED BY: \_\_\_\_\_

Date/Time Received: \_\_\_\_\_

Loc: 600

JO# **92036**CLIENT: GolderCARRIER/DRIVER: FEDEX F.O. 14 MAY 14 7:00Cus \_\_\_\_\_ at: ☒ YES ☐ NONumber of Coolers Received: 1IR THERMOMETER #: 549THERMOMETER CORRECTION FACTOR: -0.1

Temperature of the samples(s):

Temp taken by: TB = Temp. Blank and/or SC = Sample Container

Cooler ID	<u>G/B</u>								
Temp	TB <u>SC</u> <u>2.3</u>	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC
Corrected Temp	<u>2.2</u>								

Samples received on ice? ☒ YES ☐ NOLABORATORY PRESERVATION OF SAMPLES REQUIRED: ☐ NO ☐ YESBase samples are >pH 12: ☐ YES ☐ NOAcid preserved are <pH 2: ☐ YES ☐ NO

Lot # \_\_\_\_\_

Lot # \_\_\_\_\_

VOA headspace acceptable: ☐ YES ☐ NO ☐ NAVOA trip blanks included: ☐ YES ☐ NO ☐ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		

COMMENTS: <u>RUSH 24 Hr. TAT</u>

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15**Upton, Cathy**

---

**From:** Marlow, Abby [Abby\_Marlow@golder.com]  
**Sent:** Wednesday, May 14, 2014 10:32 AM  
**To:** Upton, Cathy  
**Cc:** Faeth-Boyd, Anne  
**Subject:** Golder Exide samples 5.14.14  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Hey Cathy,

We shipped a cooler of samples to the Houston Test America Lab and it included 4 samples. The four samples were 2014-SCC-16 (0-0.5), 2014-SCC-16 (0.5-1), 2014-CUFT-18 (0-0.5), and 2014-CUFT-18 (0.5-1). The 2014-CUFT-18 (0.5- 1.0) and 2014-SCC-16 (0.5-1) need to be put on hold. Also can you please change the 2014-CUFT-18 sample both (0-0.5) and (0.5-1) to 2014-CUFT-19.

Thank you

---

**Abby Marlow** | Environmental Scientist | **Golder Associates Inc.**

500 Century Plaza Drive, Suite 190, Houston, Texas, USA 77073

**T:** +1 (281) 821-6868 | **D:** +1 (281) 821 6868 | **F:** +1 (281) 821-6870 | **E:** [Abby\\_Marlow@golder.com](mailto:Abby_Marlow@golder.com) | [www.golder.com](http://www.golder.com)

**Work Safe, Home Safe**

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**Please consider the environment before printing this email.**

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-92036-1

**Login Number: 92036**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Lopez, Sandro R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.2
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

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<b>Sample Dates:</b>	January 10 & 13, 2013	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 600-85473-1, 600-85473-2, 600-85473-3		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

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## TESTS/ METHODS

Polychlorinated Biphenyls (PCBs) by SW-846 8082 – Gas Chromatography (GC)

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)

## SAMPLES

32 soil samples, 2 field duplicates, 2 equipment rinsate blanks, 2 field MS/MSD pairs. See Table 1 for a complete cross-referenced listing of samples.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.

The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures
- Results Reporting Procedures



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

- Laboratory and Field QC Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13;
- Organics: 60-140% spike recovery (and not less than 10% or data is rejected) and +MQL difference or 40% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or ‘see’ in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or ‘see’ in a given sample. For TRRP, non-detects





## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the Unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report

## USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. As needed per TRRP, the Unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria.
2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high can be used; however, the reported concentration may be high. Detects that are



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.

Reviewer: Jing Song Xi 8/25/2015

## QUALITY CONTROL PARAMETERS AND OUTCOMES

### Data Completeness

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format. Minor revisions have been made for work orders 600-85473-1. All revisions are detailed in the laboratory narrative.

### Chain-of-Custody

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, except as follows:

- Minor instances of container labels not matching information listed on the COC. These inconsistencies have been addressed by the laboratory and do not affect sample results.

### Sample Condition

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation:

- For 600-85473, the temperatures of the coolers at receipt were 2.2°C and 3.0°C.

### Field Procedures

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.

Two field duplicates were collected with the 32 investigative samples. Two site-specific MS/MSD samples were collected. Two equipment rinsate blanks were collected with the samples.

### Results Reporting Procedures

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

**MQLs-** The LORPs have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1  $^{Tot}Soil_{Comb}$  and Tier 1, 2 or 3  $^{GW}Soil_{Ing}$  PCLs for a 30-acre source area. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte.

**MDLs-** According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

### Laboratory Blanks

Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. There were no detections in the laboratory blanks.

### Field QC Blanks

Two equipment rinsate blanks were collected to document sufficient field decontamination procedures for soil sampling devices. No analytes were detected in the field QC blanks. Results for samples collected with a contaminated rinsate blank may be affected by field contamination. However, analytes were not detected in the rinsate blanks, and thus there is no effect on data quality.

### Laboratory Control Sample

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects.

### Matrix Spike Recovery

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch plus a Post Digestion Spike (PDS) with each metals analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using a sample from the site, which includes 2 MS/MSD for Total Metals, as shown in Table 1.



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
125089	600-85473-16	ECO-10A (0-0.5)	Antimony	0.263	56.8, 57.3	47	43	JL
125124	600-85473-34	2013-FWFS-5A (0-2)	Antimony	0.275	57.7, 57.2	35	34	JL
125124	600-85473-34	2013-FWFS-5A (0-2)	Lead	100	57.7, 57.2	-43	-46	JL
125124	600-85473-36	2013-BSB-8A (8-10)	Antimony	26.8	60.1, 61.8	-9	2	JL
125124	600-85473-36	2013-BSB-8A (8-10)	Cadmium	11.4	30.0, 30.9	60	70	JL
125124	600-85473-36	2013-BSB-8A (8-10)	Lead	14800	60.1, 61.8	-23109	-17640	-

NA – Not available.

In all cases where the spike amount is less than four times the result in the unspiked parent sample, the data are considered inconclusive and the MS/MSD recovery check is waived. Note that the PDS recoveries and the recoveries for the remaining MS/MSD are within the criteria.

## Surrogate Recovery

Surrogate recoveries were within acceptable criteria for PCB analyses.

## Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals and pH analytical batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes 2 MSD and MD for Total Metals, as shown in Table 1.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	MSD RPD	MD RPD	Qual
125124	600-85473-16	ECO-10A (0-0.5)	Cadmium	0.409	8	73	J



## Data Usability Summary

Test America Work Orders: 600-85473-1, 600-85473-2, 600-85473-3

125124	600-85473-16	ECO-10A (0-0.5)	Lead	21.4	1	93	J
125124	600-85473-34	2013-FWFS-5A (0-2)	Lead	100	2	74	J
125124	600-85473-36	2013-BSB-8A (8-10)	Lead	14800	191	22	J

### Field Duplicate Precision

Two field duplicates were collected with the samples and analyzed for cadmium and lead. Results are summarized in Table 3. The RPDs (or the absolute difference between results for concentrations <5x MQL and for non-detects) are within the TRRP criteria, which indicates good precision for the sampling, preparation, and analysis technique on the given sample matrix, except as follows:

- The results for Total lead are outside the criteria for the pair collected at 2013-FWFS-5A (0-2).
- The results for Total cadmium and Total lead are outside the criteria for the pair collected at 2013-BSB-8A (8-10).

### Instrument Tuning

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.

### Instrument Calibration

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations.

### Instrument Performance

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists, except as follows:

- The interference check standard solution associated with batch 123111 showed results for lead at a level greater than 2 times the LOD. Since this analyte was not detected in the field sample, no corrective action was required.

### Internal Standards

According to the LRC, area counts and retention times were within method requirements.

**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Prep Batch/ Analysis Batch	Sample Date	Matrix	Comments
600-85473-1	MW-33/2013-FWFS-5B (1-2)	125089/125211 128791/128837	1/10/2014	Soil	
600-85473-2	MW-33/2013-FWFS-5B (2-4)	127810/127873	1/10/2014	Soil	
600-85473-3	MW-33/2013-FWFS-5B (4-5)	125089/125211	1/10/2014	Soil	
600-85473-4	F-5D (0-0.25)	125089/125211	1/10/2014	Soil	
600-85473-5	F-5D (1)		1/10/2014	Soil	Not reported
600-85473-6	F-5E (0-0.25)	125089/125211	1/10/2014	Soil	
600-85473-7	F-5E (1)		1/10/2014	Soil	Not reported
600-85473-8	F-5B (0-0.25)	125089/125211	1/10/2014	Soil	
600-85473-9	F-5B (1)		1/10/2014	Soil	Not reported
600-85473-10	F-5A (0-0.25)	125089/125211	1/10/2014	Soil	
600-85473-11	F-5A (1)	127810/127873	1/10/2014	Soil	
600-85473-12	F-5C (0-0.25)	125089/125211	1/10/2014	Soil	
600-85473-13	F-5C (1)		1/10/2014	Soil	Not reported
600-85473-14	SRB-VS-9E (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-15	SRB-VS-11A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-16	ECO-10A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-17	ECO-4A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-18	ECO-4A (0.5-2)		1/10/2014	Soil	Not reported
600-85473-19	E-11D (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-20	2013-NT-01 (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-21	2013-NT-01 (0.2-2)	125089/125211	1/10/2014	Soil	
600-85473-22	E-12A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-23	2013-NT-02 (0-0.5)	125089/125211 128791/128837	1/10/2014	Soil	
600-85473-24	2013-NT-02 (0.5-2)	125089/125211	1/10/2014	Soil	
600-85473-25	E-13A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-26	E-14A (0-0.5)	125089/125211	1/10/2014	Soil	
600-85473-27	Rinse Blank Geo	125237/125450 125065/125111	1/10/2014	Water	Rinsate Blank for PCBs associated with lab report J85389
600-85473-28	MW-27E (0-1)	125124/125111	1/13/2014	Soil	
600-85473-29	MW-27E (1-2)	127810/127873	1/13/2014	Soil	
600-85473-30	MW-27E (2-3)		1/13/2014	Soil	Not reported
600-85473-31	MW-29A (0-0.5)	125124/125111	1/13/2014	Soil	
600-85473-32	Dup-10	125124/125111	1/13/2014	Soil	Duplicate of 2013-FWFS-5A (0-2)
600-85473-33	Dup-11	125124/125111	1/13/2014	Soil	Duplicate of 2013-BSB-8A (8-10)
600-85473-34	2013-FWFS-5A (0-2)	125124/125111	1/13/2014	Soil	site-specific MS/MSD
600-85473-35	2013-FWFS-5A (2-4)		1/13/2014	Soil	Not reported
600-85473-36	2013-BSB-8A (8-10)	125124/125111	1/13/2014	Soil	site-specific MS/MSD
600-85473-37	2013-FWCS-12A (2-2.7)	125124/125111	1/13/2014	Soil	
600-85473-38	2013-MW-17B (0-0.5)	125124/125111	1/13/2014	Soil	
600-85473-39	SCC-10B (0-0.5)	125124/125111	1/13/2014	Soil	
600-85473-40	Rinse Blank Geo	125065/125111	1/13/2014	Water	Rinsate Blank
600-85473-41	ECO-4B (0-0.5)	125124/125111	1/13/2014	Soil	
600-85473-42	ECO-4B (0.5-2)		1/13/2014	Soil	Not reported

TABLE 2 - QUALIFIED DATA

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifier	Explanation
600-85473-15	SRB-VS-11A (0-0.5)	Antimony	0.602	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-16	ECO-10A (0-0.5)	Antimony	<0.263	mg/kg	UJL	Matrix Spike recovery below specifications, >30%
		Cadmium	0.409	mg/kg	J	Lab duplicate RPD outside specifications and analyte concentration >5x MQL
		Lead	21.4	mg/kg	J	Lab duplicate RPD outside specifications and analyte concentration >5x MQL
		Cadmium	1.58	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-28	MW-27E (0-1)	Lead	298	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	1.27	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-31	MW-29A (0-0.5)	Lead	171	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	28.3	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-32	DUP-10	Lead	1130	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	0.2	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-33	DUP-11	Lead	59.2	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Antimony	<0.275	mg/kg	UJL	Matrix Spike recovery below specifications, >30%
600-85473-34	2013-FWFS-5A (0-2)	Cadmium	0.529	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Lead	100	mg/kg	JL	Matrix Spike recovery below specifications, >30%, Lab duplicate RPD outside specifications and analyte concentration >5x MQL
		Lead	14800	mg/kg	JL	Matrix Spike recovery below specifications, >30%, Lab duplicate RPD outside specifications and analyte concentration >5x MQL
600-85473-36	2013-BSB-8A (8-10)	Lead	106	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-37	2013-FWCS-12A (2-2.7)	Lead	32.4	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-38	2013-MW-17B (0-0.5)	Cadmium	5.19	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Lead	6830	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Antimony	1.69	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-39	SCC-10B (0-0.5)	Cadmium	1.85	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Lead	333	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	1.21	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85473-41	ECO-4B (0-0.5)	Lead	201	mg/kg	JL	Matrix Spike recovery below specifications, >30%

## Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data; The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data; The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected; Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data; The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

U Not detected; The analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data; The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low



**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added
DUP-10 / 2013-FWFS-5A (0-2)	cadmium	0.529	28.3	192.7	A	J
	lead	100	1130	167.5	A	J
DUP-11 / 2013-BSB-8A (8-10)	lead	14800	59.2	198.4	A	J

<sup>a</sup> RPD = ((SR - DR)\*200)/(SR + DR)

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

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Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-85473-1

Client Project/Site: Exide Recycling Center

Revision: 5

For:

Golder Associates Inc.

500 Century Plaza Drive

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Attn: Christina Higginbotham



Authorized for release by:

6/11/2015 6:13:04 PM

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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.



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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-85473-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☒ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

4/21/2014

Date

Project Management Asst II

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/26/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85473-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?		X			R06A
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/26/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85473-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?		X			S08A
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/26/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85473-1
Reviewer Name:	Dean A Joiner		

ER # <sup>1</sup>	Description
R07C	Method 8082: Since Aroclors are multi-component analytes, it is not possible to include all seven Aroclors of interest into the LCS. The only two Aroclors that were spiked into the LCS were Aroclors 1016 and 1260. Since these two Aroclors essentially contain all analytes found in the other five individual Aroclors of interest, the recovery of Aroclors 1016 and 1260 in the LCS will be representative of the recovery of the other five Aroclors.
R07C	Method 6010B: 600-85473-16 MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: 600-85473-34 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected. Method 6010B: 600-85473-36 MS failed the recovery criteria for the following analyte(s): Antimony, Arsenic, Cadmium, Lead. Matrix interference is suspected. Method 6010B: 600-85473-36 MSD failed the recovery criteria for the following analyte(s): Antimony, Cadmium, Lead. Matrix interference is suspected.
R07D	Method 6010B: 600-85473-36 MSD failed the RPD criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.
R08C	Method 6010B: 600-85473-16 DU failed the RPD criteria for the following analyte(s): Cadmium, Lead. Matrix interference is suspected. Method 6010B: 600-85473-34 DU failed the RPD criteria for the following analyte(s): Lead. Matrix interference is suspected. Method 6010B: 600-85473-36 DU failed the RPD criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.
R10B	Method 6010B: The following sample(s) was diluted to bring the concentration of target analytes within the calibration range: 600-85473-3, 600-85473-36, 600-85473-36 DU, 600-85473-36 MS, 600-85473-36 MSD, and 600-85473-38. Elevated reporting limits (RLs) are provided.
S08A	Method 6010B: The interference check standard solution (ICSA) associated with batch 125111 showed results for Lead at a level greater than 2 times the limit of detection (LOD). Since this analyte was not detected in the client sample, no corrective action was required.
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

### Detection Check Standard

Matrix: Soil  
Method: 6010B  
Preparation: 3050  
Date Analyzed: 7/2/2013  
Date Prepared: 7/2/2013  
Instrument: Thermo 6500  
TALS Batches: 109822, 109690  
Prep/Reagent Factor = 50  
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	1.67	25
Antimony	0.231553	0.45	0.495	2.5
Arsenic	0.217923	0.5	0.465	1
Barium	0.011322	0.03	0.03	1
Beryllium	0.014513	0.02	0.02	0.25
Boron	0.385535	0.6	0.695	20
Cadmium	0.025642	0.05	0.05	0.25
Calcium	0.86399	1.5	3.42	100
Chromium	0.050606	0.1	0.06	0.5
Cobalt	0.067622	0.1	0.105	0.5
Copper	0.173703	0.5	0.525	0.5
Iron	2.534007	4	3.58	20
Lead	0.104832	0.2	0.205	0.5
Selenium	0.258884	0.5	0.495	2
Manganese	0.038111	0.05	0.02	1.5
Molybdenum	0.136448	0.35	0.34	0.5
Nickel	0.116599	0.15	0.145	1
Silver	0.118848	0.2	0.18	0.5
Sodium	0.885548	2.4	1.805	100
Strontium	0.00252	0.005	1.01	0.25
Thallium	0.276988	0.7	0.655	1.5
Tin	0.08729	0.15	0.12	1
Titanium	0.014529	0.03	0.05	0.5
Vanadium	0.079068	0.15	0.145	0.5
Zinc	0.108432	0.2	0.345	1.5



### Detection Check Standard

Matrix: Water  
Method: 200.7/6010  
Preparation: 200.7P/3010  
Date Analyzed: 7/2/2013  
Date Prepared: 7/2/2013  
Instrument: Thermo 6500  
TALs Batches: 109822, 109666  
Units: mg/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.006	0.02	0.0335	0.5
Antimony	0.0063	0.01	0.0105	0.05
Arsenic	0.0033	0.01	0.0071	0.01
Barium	0.0022	0.005	0.0051	0.02
Beryllium	0.00134	0.002	0.0039	0.005
Boron	0.0077	0.02	0.0216	0.2
Cadmium	0.00073	0.001	0.0011	0.005
Calcium	0.022	0.05	0.0796	1
Chromium	0.0016	0.002	0.0031	0.01
Cobalt	0.00063	0.001	0.001	0.01
Copper	0.0014	0.002	0.0017	0.01
Iron	0.087	0.1	0.0874	0.4
Lithium	0.0024	0.005	0.0042	0.2
Lead	0.0029	0.005	0.004	0.01
Selenium	0.0042	0.01	0.0091	0.04
Manganese	0.00084	0.002	0.0013	0.01
Molybdenum	0.0027	0.005	0.0048	0.01
Nickel	0.00179	0.005	0.0047	0.01
Silver	0.0012	0.0025	0.0017	0.01
Sodium	0.02	0.05	0.0416	1
Strontium	0.0005	0.001	0.0009	0.005
Thallium	0.0078	0.02	0.0205	0.03
Tin	0.0028	0.005	0.0047	0.01
Titanium	0.0011	0.002	0.0019	0.01
Vanadium	0.0017	0.002	0.0044	0.01
Zinc	0.0022	0.005	0.0071	0.01

### Detection Check Standard

Matrix: Water  
Method: 8082  
Preparation: 3510  
Date Analyzed: 7/9-10/2013  
Date Prepared: 7/3,9/2013  
TALs Batches: 600-109918/7-a,600-110312/3,4,5,6,7,8-a  
Units: ug/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aroclor 1016	0.27	0.5	0.496	0.5
Aroclor 1221	0.22	0.5	0.323	0.5
Aroclor 1232	0.06	0.5	0.288	0.5
Aroclor 1242	0.27	0.5	0.422	0.5
Aroclor 1248	0.1	0.5	0.484	0.5
Aroclor 1254	0.07	0.5	0.37	0.5
Aroclor 1260	0.17	0.5	0.565	0.5
Aroclor 1262	0.5	0.5	0.521	0.5

## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Job ID: 600-85473-1**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-85473-1

#### Comments

The report was revised on 03/05/14 to report total metals for samples 15, 34, 38 and 39, replacing the final report generated on 01/22/14. The report was revised on 04/21/14 to report all 5 metals for samples 14, 16, 23, and 41, replacing the final report generated on 03/26/14. The report was revised on 05/09/14 to report As and Se for samples 20, 21, 23 and 24 per client request, replacing the final report generated on 04/21/14. See attached email. The report was revised on 06/11/15 to include arsenic in samples 25 and 26, replacing the final report generated on 05/09/14.

#### Receipt

The samples were received on 1/14/2014 10:21 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.2° C and 3.3° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL HOU
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-85473-1	MW-33/2013-FWFS-5B (1-2)	Solid	01/10/14 16:00	01/14/14 10:21
600-85473-3	MW-33/2013-FWFS-5B (4-5)	Solid	01/10/14 16:04	01/14/14 10:21
600-85473-4	F-5D (0.0-0.25)	Solid	01/10/14 13:38	01/14/14 10:21
600-85473-6	F-5E (0.0-0.25)	Solid	01/10/14 13:42	01/14/14 10:21
600-85473-8	F-5B (0.0-0.25)	Solid	01/10/14 13:47	01/14/14 10:21
600-85473-10	F-5A (0.0-0.25)	Solid	01/10/14 13:49	01/14/14 10:21
600-85473-12	F-5C (0.0-0.25)	Solid	01/10/14 13:51	01/14/14 10:21
600-85473-14	SRB-VS-9E (0.0-0.5)	Solid	01/10/14 14:08	01/14/14 10:21
600-85473-15	SRB-VS-11A (0.0-0.5)	Solid	01/10/14 14:16	01/14/14 10:21
600-85473-16	ECO-10A (0.0-0.5)	Solid	01/10/14 14:43	01/14/14 10:21
600-85473-17	ECO-4A (0.0-0.5)	Solid	01/10/14 15:10	01/14/14 10:21
600-85473-19	E-11D (0.0-0.5)	Solid	01/10/14 15:45	01/14/14 10:21
600-85473-20	2013-NT-01 (0.0-0.5)	Solid	01/10/14 15:58	01/14/14 10:21
600-85473-21	2013-NT-01 (0.5-2)	Solid	01/10/14 15:59	01/14/14 10:21
600-85473-22	E-12A (0.0-0.5)	Solid	01/10/14 16:01	01/14/14 10:21
600-85473-23	2013-NT-02 (0.0-0.5)	Solid	01/10/14 16:15	01/14/14 10:21
600-85473-24	2013-NT-02 (0.5-2))	Solid	01/10/14 16:16	01/14/14 10:21
600-85473-25	E-13A (0.0-0.5)	Solid	01/10/14 16:22	01/14/14 10:21
600-85473-26	E-14A (0.0-0.5)	Solid	01/10/14 16:30	01/14/14 10:21
600-85473-27	RINSE BLANK GEO	Water	01/10/14 08:30	01/14/14 10:21
600-85473-28	MW-27E (0-1)	Solid	01/13/14 08:42	01/14/14 10:21
600-85473-31	MW-29A (0.0-0.5)	Solid	01/13/14 08:52	01/14/14 10:21
600-85473-32	DUP-10	Solid	01/13/14 00:00	01/14/14 10:21
600-85473-33	DUP-11	Solid	01/13/14 00:00	01/14/14 10:21
600-85473-34	2013-FWFS-SA (0-2)	Solid	01/13/14 09:12	01/14/14 10:21
600-85473-36	2013-BSB-8A (8-10)	Solid	01/13/14 09:50	01/14/14 10:21
600-85473-37	2013-FWCS-12A (2-2.7)	Solid	01/13/14 11:05	01/14/14 10:21
600-85473-38	2013-MW-17B (0.0-0.5)	Solid	01/13/14 11:51	01/14/14 10:21
600-85473-39	SCC-10B (0.0-0.5)	Solid	01/13/14 12:04	01/14/14 10:21
600-85473-40	RINSE BLANK GEO	Water	01/13/14 13:15	01/14/14 10:21
600-85473-41	ECO04B (0.0-0.5)	Solid	01/13/14 13:48	01/14/14 10:21

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: MW-33/2013-FWFS-5B (1-2)

Date Collected: 01/10/14 16:00

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-1

Matrix: Solid

Percent Solids: 81.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	40.5		0.291	0.0298	mg/Kg	☼	01/16/14 10:03	01/17/14 13:56	1
Lead	1420		0.581	0.122	mg/Kg	☼	01/16/14 10:03	01/17/14 13:56	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%	—		01/15/14 15:56	1
Percent Solids	81		1.0	1.0	%	—		01/15/14 15:56	1

## Client Sample ID: MW-33/2013-FWFS-5B (4-5)

Date Collected: 01/10/14 16:04

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-3

Matrix: Solid

Percent Solids: 73.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	7.20		0.334	0.0343	mg/Kg	☼	01/16/14 10:03	01/17/14 14:05	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10200		13.4	2.80	mg/Kg	☼	01/16/14 10:03	01/17/14 16:12	20

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%	—		01/15/14 15:56	1
Percent Solids	73		1.0	1.0	%	—		01/15/14 15:56	1

## Client Sample ID: F-5D (0.0-0.25)

Date Collected: 01/10/14 13:38

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-4

Matrix: Solid

Percent Solids: 75.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.07		0.329	0.0338	mg/Kg	☼	01/16/14 10:03	01/17/14 14:08	1
Lead	101		0.659	0.138	mg/Kg	☼	01/16/14 10:03	01/17/14 14:08	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%	—		01/15/14 15:56	1
Percent Solids	76		1.0	1.0	%	—		01/15/14 15:56	1

## Client Sample ID: F-5E (0-0.25)

Date Collected: 01/10/14 13:42

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-6

Matrix: Solid

Percent Solids: 68.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	2.14		0.336	0.0345	mg/Kg	☼	01/16/14 10:03	01/17/14 14:10	1
Lead	161		0.673	0.141	mg/Kg	☼	01/16/14 10:03	01/17/14 14:10	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	31		1.0	1.0	%	—		01/15/14 15:56	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: F-5E (0-0.25)

Date Collected: 01/10/14 13:42

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-6

Matrix: Solid

### General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: F-5B (0-0.25)

Date Collected: 01/10/14 13:47

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-8

Matrix: Solid

Percent Solids: 73.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.30		0.332	0.0340	mg/Kg	☼	01/16/14 10:03	01/17/14 14:13	1
Lead	116		0.663	0.139	mg/Kg	☼	01/16/14 10:03	01/17/14 14:13	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	73		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: F-5A (0-0.25)

Date Collected: 01/10/14 13:49

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-10

Matrix: Solid

Percent Solids: 72.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.11		0.318	0.0327	mg/Kg	☼	01/16/14 10:03	01/17/14 14:15	1
Lead	60.7		0.637	0.133	mg/Kg	☼	01/16/14 10:03	01/17/14 14:15	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	72		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: F-5C (0-0.25)

Date Collected: 01/10/14 13:51

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-12

Matrix: Solid

Percent Solids: 70.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.55		0.327	0.0335	mg/Kg	☼	01/16/14 10:03	01/17/14 14:17	1
Lead	162		0.654	0.137	mg/Kg	☼	01/16/14 10:03	01/17/14 14:17	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	29		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	71		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: SRB-VS-9E (0-0.5)

Date Collected: 01/10/14 14:08

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-14

Matrix: Solid

Percent Solids: 80.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.278	U	3.00	0.278	mg/Kg	☼	01/16/14 10:03	01/17/14 14:20	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: SRB-VS-9E (0-0.5)

Date Collected: 01/10/14 14:08

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-14

Matrix: Solid

Percent Solids: 80.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.26		1.20	0.262	mg/Kg	☼	01/16/14 10:03	01/17/14 14:20	1
Cadmium	0.210	J	0.300	0.0308	mg/Kg	☼	01/16/14 10:03	01/17/14 14:20	1
Lead	31.0		0.600	0.126	mg/Kg	☼	01/16/14 10:03	01/17/14 14:20	1
Selenium	0.311	U	2.40	0.311	mg/Kg	☼	01/16/14 10:03	01/17/14 14:20	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	81		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: SRB-VS-11A (0-0.5)

Date Collected: 01/10/14 14:16

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-15

Matrix: Solid

Percent Solids: 83.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.602	J	2.79	0.258	mg/Kg	☼	01/16/14 10:03	01/17/14 14:22	1
Arsenic	11.4		1.12	0.243	mg/Kg	☼	01/16/14 10:03	01/17/14 14:22	1
Cadmium	1.44		0.279	0.0286	mg/Kg	☼	01/16/14 10:03	01/17/14 14:22	1
Lead	273		0.558	0.117	mg/Kg	☼	01/16/14 10:03	01/17/14 14:22	1
Selenium	0.491	J	2.23	0.289	mg/Kg	☼	01/16/14 10:03	01/17/14 14:22	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	83		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: ECO-10A (0-0.5)

Date Collected: 01/10/14 14:43

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-16

Matrix: Solid

Percent Solids: 85.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.263	U	2.84	0.263	mg/Kg	☼	01/16/14 10:03	01/17/14 14:24	1
Arsenic	6.76		1.14	0.248	mg/Kg	☼	01/16/14 10:03	01/17/14 14:24	1
Cadmium	0.409		0.284	0.0291	mg/Kg	☼	01/16/14 10:03	01/17/14 14:24	1
Lead	21.4		0.568	0.119	mg/Kg	☼	01/16/14 10:03	01/17/14 14:24	1
Selenium	0.534	J	2.27	0.294	mg/Kg	☼	01/16/14 10:03	01/17/14 14:24	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	85		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: ECO-4A (0-0.5)

Date Collected: 01/10/14 15:10

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-17

Matrix: Solid

Percent Solids: 80.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.64		0.308	0.0316	mg/Kg	☼	01/16/14 10:03	01/17/14 14:41	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: ECO-4A (0-0.5)

Date Collected: 01/10/14 15:10

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-17

Matrix: Solid

Percent Solids: 80.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	245		0.615	0.129	mg/Kg	☼	01/16/14 10:03	01/17/14 14:41	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	80		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: E-11D (0-0.5)

Date Collected: 01/10/14 15:45

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-19

Matrix: Solid

Percent Solids: 75.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.22		0.305	0.0313	mg/Kg	☼	01/16/14 10:03	01/17/14 14:44	1
Lead	152		0.610	0.128	mg/Kg	☼	01/16/14 10:03	01/17/14 14:44	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	75		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-NT-01 (0-0.5)

Date Collected: 01/10/14 15:58

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-20

Matrix: Solid

Percent Solids: 76.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.9		1.27	0.276	mg/Kg	☼	01/16/14 10:03	01/17/14 14:46	1
Cadmium	0.571		0.317	0.0325	mg/Kg	☼	01/16/14 10:03	01/17/14 14:46	1
Lead	19.5		0.634	0.133	mg/Kg	☼	01/16/14 10:03	01/17/14 14:46	1
Selenium	0.328	U	2.54	0.328	mg/Kg	☼	01/16/14 10:03	01/17/14 14:46	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-NT-01 (0.5-2)

Date Collected: 01/10/14 15:59

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-21

Matrix: Solid

Percent Solids: 74.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.4		1.30	0.283	mg/Kg	☼	01/16/14 10:03	01/17/14 14:48	1
Cadmium	0.618		0.325	0.0334	mg/Kg	☼	01/16/14 10:03	01/17/14 14:48	1
Lead	18.5		0.650	0.136	mg/Kg	☼	01/16/14 10:03	01/17/14 14:48	1
Selenium	0.546	J	2.60	0.337	mg/Kg	☼	01/16/14 10:03	01/17/14 14:48	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/15/14 15:56	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: 2013-NT-01 (0.5-2)

Date Collected: 01/10/14 15:59

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-21

Matrix: Solid

### General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: E-12A (0-0.5)

Date Collected: 01/10/14 16:01

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-22

Matrix: Solid

Percent Solids: 77.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.54		0.302	0.0310	mg/Kg	☼	01/16/14 10:03	01/17/14 14:51	1
Lead	201		0.604	0.127	mg/Kg	☼	01/16/14 10:03	01/17/14 14:51	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-NT-02 (0-0.5)

Date Collected: 01/10/14 16:15

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-23

Matrix: Solid

Percent Solids: 75.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.13	J	3.21	0.297	mg/Kg	☼	01/16/14 10:03	01/17/14 14:53	1
Arsenic	14.9		1.28	0.280	mg/Kg	☼	01/16/14 10:03	01/17/14 14:53	1
Cadmium	4.89		0.321	0.0329	mg/Kg	☼	01/16/14 10:03	01/17/14 14:53	1
Lead	837		0.641	0.134	mg/Kg	☼	01/16/14 10:03	01/17/14 14:53	1
Selenium	0.654	J	2.57	0.332	mg/Kg	☼	01/16/14 10:03	01/17/14 14:53	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	76		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-NT-02 (0.5-2))

Date Collected: 01/10/14 16:16

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-24

Matrix: Solid

Percent Solids: 77.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.1		1.20	0.262	mg/Kg	☼	01/16/14 10:03	01/17/14 14:56	1
Cadmium	0.354		0.300	0.0308	mg/Kg	☼	01/16/14 10:03	01/17/14 14:56	1
Lead	21.2		0.600	0.126	mg/Kg	☼	01/16/14 10:03	01/17/14 14:56	1
Selenium	0.324	J	2.40	0.311	mg/Kg	☼	01/16/14 10:03	01/17/14 14:56	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: E-13A (0-0.5)

Date Collected: 01/10/14 16:22

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-25

Matrix: Solid

Percent Solids: 76.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	13.8		1.23	0.268	mg/Kg	☼	01/16/14 10:03	01/17/14 14:58	1
Cadmium	0.492		0.307	0.0315	mg/Kg	☼	01/16/14 10:03	01/17/14 14:58	1
Lead	44.4		0.615	0.129	mg/Kg	☼	01/16/14 10:03	01/17/14 14:58	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: E-14A (0-0.5)

Date Collected: 01/10/14 16:30

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-26

Matrix: Solid

Percent Solids: 71.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	19.0		1.34	0.292	mg/Kg	☼	01/16/14 10:03	01/17/14 15:07	1
Cadmium	1.84		0.335	0.0344	mg/Kg	☼	01/16/14 10:03	01/17/14 15:07	1
Lead	349		0.670	0.140	mg/Kg	☼	01/16/14 10:03	01/17/14 15:07	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	72		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: RINSE BLANK GEO

Date Collected: 01/10/14 08:30

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-27

Matrix: Water

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000270	U	0.000500	0.000270	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1221	0.000220	U	0.000500	0.000220	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1232	0.0000600	U	0.000500	0.0000600	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1242	0.0000800	U	0.000500	0.0000800	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1248	0.000100	U	0.000500	0.000100	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1254	0.0000700	U	0.000500	0.0000700	mg/L		01/17/14 14:01	01/20/14 15:39	1
PCB-1260	0.000170	U	0.000500	0.000170	mg/L		01/17/14 14:01	01/20/14 15:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		35 - 133				01/17/14 14:01	01/20/14 15:39	1
DCB Decachlorobiphenyl	36		28 - 174				01/17/14 14:01	01/20/14 15:39	1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000350	U	0.00500	0.000350	mg/L		01/15/14 16:45	01/16/14 16:14	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/15/14 16:45	01/16/14 16:14	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: MW-27E (0-1)

Date Collected: 01/13/14 08:42

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-28

Matrix: Solid

Percent Solids: 77.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.58		0.312	0.0320	mg/Kg	☼	01/16/14 13:47	01/17/14 12:49	1
Lead	298		0.623	0.131	mg/Kg	☼	01/16/14 13:47	01/17/14 12:49	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: MW-29A (0-0.5)

Date Collected: 01/13/14 08:52

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-31

Matrix: Solid

Percent Solids: 76.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.27		0.308	0.0316	mg/Kg	☼	01/16/14 13:47	01/17/14 12:51	1
Lead	171		0.616	0.129	mg/Kg	☼	01/16/14 13:47	01/17/14 12:51	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: DUP-10

Date Collected: 01/13/14 00:00

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-32

Matrix: Solid

Percent Solids: 76.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	28.3		0.299	0.0307	mg/Kg	☼	01/16/14 13:47	01/17/14 12:54	1
Lead	1130		0.599	0.126	mg/Kg	☼	01/16/14 13:47	01/17/14 12:54	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: DUP-11

Date Collected: 01/13/14 00:00

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-33

Matrix: Solid

Percent Solids: 87.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.200	J	0.278	0.0285	mg/Kg	☼	01/16/14 13:47	01/17/14 13:03	1
Lead	59.2		0.555	0.116	mg/Kg	☼	01/16/14 13:47	01/17/14 13:03	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	13		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	87		1.0	1.0	%			01/15/14 15:56	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: 2013-FWFS-SA (0-2)

Date Collected: 01/13/14 09:12

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-34

Matrix: Solid

Percent Solids: 80.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.275	U	2.97	0.275	mg/Kg	☼	01/16/14 13:47	01/17/14 13:05	1
Arsenic	11.4		1.19	0.259	mg/Kg	☼	01/16/14 13:47	01/17/14 13:05	1
Cadmium	0.529		0.297	0.0305	mg/Kg	☼	01/16/14 13:47	01/17/14 13:05	1
Lead	100		0.594	0.125	mg/Kg	☼	01/16/14 13:47	01/17/14 13:05	1
Selenium	0.308	U	2.38	0.308	mg/Kg	☼	01/16/14 13:47	01/17/14 13:05	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	80		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-BSB-8A (8-10)

Date Collected: 01/13/14 09:50

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-36

Matrix: Solid

Percent Solids: 77.1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	14800		12.1	2.54	mg/Kg	☼	01/16/14 13:47	01/17/14 16:00	20

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-FWCS-12A (2-2.7)

Date Collected: 01/13/14 11:05

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-37

Matrix: Solid

Percent Solids: 76.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	106		0.641	0.134	mg/Kg	☼	01/16/14 13:47	01/17/14 13:25	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	76		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-MW-17B (0-0.5)

Date Collected: 01/13/14 11:51

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-38

Matrix: Solid

Percent Solids: 80.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	32.4		2.96	0.275	mg/Kg	☼	01/16/14 13:47	01/17/14 13:34	1
Arsenic	36.7		1.19	0.258	mg/Kg	☼	01/16/14 13:47	01/17/14 13:34	1
Cadmium	5.19		0.296	0.0304	mg/Kg	☼	01/16/14 13:47	01/17/14 13:34	1
Selenium	1.35	J	2.37	0.307	mg/Kg	☼	01/16/14 13:47	01/17/14 13:34	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6830		11.9	2.49	mg/Kg	☼	01/16/14 13:47	01/17/14 16:09	20

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Client Sample ID: 2013-MW-17B (0-0.5)

Date Collected: 01/13/14 11:51

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-38

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	20		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	80		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: SCC-10B (0-0.5)

Date Collected: 01/13/14 12:04

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-39

Matrix: Solid

Percent Solids: 77.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.69	J	3.01	0.278	mg/Kg	☼	01/16/14 13:47	01/17/14 13:37	1
Arsenic	14.0		1.20	0.262	mg/Kg	☼	01/16/14 13:47	01/17/14 13:37	1
Cadmium	1.85		0.301	0.0308	mg/Kg	☼	01/16/14 13:47	01/17/14 13:37	1
Lead	333		0.601	0.126	mg/Kg	☼	01/16/14 13:47	01/17/14 13:37	1
Selenium	0.601	J	2.40	0.311	mg/Kg	☼	01/16/14 13:47	01/17/14 13:37	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	77		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: RINSE BLANK GEO

Date Collected: 01/13/14 13:15

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-40

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000350	U	0.00500	0.000350	mg/L		01/15/14 16:45	01/16/14 16:21	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/15/14 16:45	01/16/14 16:21	1

## Client Sample ID: ECO04B (0-0.5)

Date Collected: 01/13/14 13:48

Date Received: 01/14/14 10:21

## Lab Sample ID: 600-85473-41

Matrix: Solid

Percent Solids: 74.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.752	J	3.19	0.295	mg/Kg	☼	01/16/14 13:47	01/17/14 13:39	1
Arsenic	31.5		1.27	0.278	mg/Kg	☼	01/16/14 13:47	01/17/14 13:39	1
Cadmium	1.21		0.319	0.0327	mg/Kg	☼	01/16/14 13:47	01/17/14 13:39	1
Lead	201		0.637	0.134	mg/Kg	☼	01/16/14 13:47	01/17/14 13:39	1
Selenium	0.573	J	2.55	0.330	mg/Kg	☼	01/16/14 13:47	01/17/14 13:39	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	75		1.0	1.0	%			01/15/14 15:56	1

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

### Qualifiers

#### GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

#### Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
F	Duplicate RPD exceeds the control limit
N	MS, MSD: Spike recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance 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.
N	RPD of the MS and MSD exceeds the control limits

### 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
CFL	Contains Free Liquid
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)

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (35-133)	DCB1 (28-174)
600-85473-27	RINSE BLANK GEO	81	36
LCS 600-125237/3-A	Lab Control Sample	73	58
MB 600-125237/1-A	Method Blank	72	57

### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 600-125237/1-A

Matrix: Water

Analysis Batch: 125450

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125237

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.000270	U	0.000500	0.000270	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1221	0.000220	U	0.000500	0.000220	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1232	0.0000600	U	0.000500	0.0000600	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1242	0.0000800	U	0.000500	0.0000800	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1248	0.000100	U	0.000500	0.000100	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1254	0.0000700	U	0.000500	0.0000700	mg/L		01/17/14 14:01	01/20/14 12:22	1
PCB-1260	0.000170	U	0.000500	0.000170	mg/L		01/17/14 14:01	01/20/14 12:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		35 - 133	01/17/14 14:01	01/20/14 12:22	1
DCB Decachlorobiphenyl	57		28 - 174	01/17/14 14:01	01/20/14 12:22	1

Lab Sample ID: LCS 600-125237/3-A

Matrix: Water

Analysis Batch: 125450

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125237

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	0.0200	0.01503		mg/L		75	53 - 119
PCB-1260	0.0200	0.01407		mg/L		70	22 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	73		35 - 133
DCB Decachlorobiphenyl	58		28 - 174

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-125065/1-A

Matrix: Water

Analysis Batch: 125111

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125065

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		01/15/14 16:45	01/16/14 15:55	1
Arsenic	0.00328	U	0.0100	0.00328	mg/L		01/15/14 16:45	01/16/14 15:55	1
Cadmium	0.000350	U	0.00500	0.000350	mg/L		01/15/14 16:45	01/16/14 15:55	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/15/14 16:45	01/16/14 15:55	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		01/15/14 16:45	01/16/14 15:55	1

Lab Sample ID: LCS 600-125065/2-A

Matrix: Water

Analysis Batch: 125111

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125065

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	1.106		mg/L		111	80 - 120
Arsenic	1.00	1.035		mg/L		104	80 - 120
Cadmium	0.500	0.5196		mg/L		104	80 - 120
Lead	1.00	1.045	^	mg/L		105	80 - 120
Selenium	1.00	1.028		mg/L		103	80 - 120

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

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

Lab Sample ID: MB 600-125089/1-A

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125089

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/16/14 10:03	01/17/14 13:42	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/16/14 10:03	01/17/14 13:42	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/16/14 10:03	01/17/14 13:42	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/16/14 10:03	01/17/14 13:42	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/16/14 10:03	01/17/14 13:42	1

Lab Sample ID: LCSSRM 600-125089/2-A

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125089

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	88.2	66.67		mg/Kg		75.6	45.4 - 231.3
Arsenic	99.6	95.92		mg/Kg		96.3	80.8 - 119.5
Cadmium	182	168.8		mg/Kg		92.7	81.9 - 118.1
Lead	115	109.8		mg/Kg		95.5	81.8 - 119.1
Selenium	150	136.7		mg/Kg		91.1	77.3 - 122.7

Lab Sample ID: 600-85473-16 MS

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: ECO-10A (0-0.5)

Prep Type: Total/NA

Prep Batch: 125089

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.263	U	56.8	26.68	N	mg/Kg	☼	47	75 - 125
Arsenic	6.76		56.8	67.64		mg/Kg	☼	107	75 - 125
Cadmium	0.409		28.4	30.67		mg/Kg	☼	107	75 - 125
Lead	21.4		56.8	67.69		mg/Kg	☼	81	75 - 125
Selenium	0.534	J	56.8	54.08		mg/Kg	☼	94	75 - 125

Lab Sample ID: 600-85473-16 MSD

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: ECO-10A (0-0.5)

Prep Type: Total/NA

Prep Batch: 125089

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.263	U	57.3	24.70	N	mg/Kg	☼	43	75 - 125	8	20
Arsenic	6.76		57.3	66.18		mg/Kg	☼	104	75 - 125	2	20
Cadmium	0.409		28.7	30.88		mg/Kg	☼	106	75 - 125	1	20
Lead	21.4		57.3	67.04		mg/Kg	☼	80	75 - 125	1	20
Selenium	0.534	J	57.3	55.03		mg/Kg	☼	95	75 - 125	2	20

Lab Sample ID: 600-85473-16 DU

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: ECO-10A (0-0.5)

Prep Type: Total/NA

Prep Batch: 125089

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.263	U	0.260	U	mg/Kg	☼	NC	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

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

Lab Sample ID: 600-85473-16 DU

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: ECO-10A (0-0.5)

Prep Type: Total/NA

Prep Batch: 125089

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	6.76		5.630		mg/Kg	☼	18	20
Cadmium	0.409		0.1912	J	mg/Kg	☼	73	20
Lead	21.4		7.778	F	mg/Kg	☼	93	20
Selenium	0.534	J	0.291	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-125124/1-A

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125124

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/16/14 13:47	01/17/14 12:04	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/16/14 13:47	01/17/14 12:04	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/16/14 13:47	01/17/14 12:04	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/16/14 13:47	01/17/14 12:04	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/16/14 13:47	01/17/14 12:04	1

Lab Sample ID: LCSSRM 600-125124/2-A

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	88.2	70.92		mg/Kg		80.4	45.4 - 231.3
Arsenic	99.6	98.87		mg/Kg		99.3	80.8 - 119.5
Cadmium	182	175.4		mg/Kg		96.4	81.9 - 118.1
Lead	115	114.7		mg/Kg		99.7	81.8 - 119.1
Selenium	150	141.5		mg/Kg		94.3	77.3 - 122.7

Lab Sample ID: 600-85473-34 MS

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-FWFS-SA (0-2)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.275	U	57.7	20.13	N	mg/Kg	☼	35	75 - 125
Arsenic	11.4		57.7	66.75		mg/Kg	☼	96	75 - 125
Cadmium	0.529		28.9	28.91		mg/Kg	☼	98	75 - 125
Lead	100		57.7	75.64	N	mg/Kg	☼	-43	75 - 125
Selenium	0.308	U	57.7	49.92		mg/Kg	☼	86	75 - 125

Lab Sample ID: 600-85473-34 MSD

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-FWFS-SA (0-2)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	0.275	U	57.2	19.33	N	mg/Kg	☼	34	75 - 125	4	20
Arsenic	11.4		57.2	61.85		mg/Kg	☼	88	75 - 125	8	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

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

Lab Sample ID: 600-85473-34 MSD

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-FWFS-SA (0-2)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.529		28.6	28.10		mg/Kg	☼	96	75 - 125	3	20
Lead	100		57.2	73.98	N	mg/Kg	☼	-46	75 - 125	2	20
Selenium	0.308	U	57.2	49.32		mg/Kg	☼	86	75 - 125	1	20

Lab Sample ID: 600-85473-36 MS

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-BSB-8A (8-10)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	26.8		60.1	21.16	N	mg/Kg	☼	-9	75 - 125		
Arsenic	23.3		60.1	67.64	N	mg/Kg	☼	74	75 - 125		
Cadmium	11.4		30.0	29.52	N	mg/Kg	☼	60	75 - 125		
Lead	14000	E	60.1	85.84	4	mg/Kg	☼	-2310	75 - 125		
Selenium	0.733	J	60.1	51.38		mg/Kg	☼	84	75 - 125		

Lab Sample ID: 600-85473-36 MSD

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-BSB-8A (8-10)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	26.8		61.8	27.79	N	mg/Kg	☼	2	75 - 125	27	20
Arsenic	23.3		61.8	71.92		mg/Kg	☼	79	75 - 125	6	20
Cadmium	11.4		30.9	33.12	N	mg/Kg	☼	70	75 - 125	12	20
Selenium	0.733	J	61.8	54.90		mg/Kg	☼	88	75 - 125	7	20

Lab Sample ID: 600-85473-34 DU

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-FWFS-SA (0-2)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.275	U	0.265	U	mg/Kg	☼	NC	20
Arsenic	11.4		11.80		mg/Kg	☼	3	20
Cadmium	0.529		0.5378		mg/Kg	☼	2	20
Lead	100		217.5	F	mg/Kg	☼	74	20
Selenium	0.308	U	0.296	U	mg/Kg	☼	NC	20

Lab Sample ID: 600-85473-36 DU

Matrix: Solid

Analysis Batch: 125211

Client Sample ID: 2013-BSB-8A (8-10)

Prep Type: Total/NA

Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	26.8		20.83	F	mg/Kg	☼	25	20
Arsenic	23.3		19.33		mg/Kg	☼	18	20
Cadmium	11.4		10.80		mg/Kg	☼	6	20
Selenium	0.733	J	0.7534	J	mg/Kg	☼	3	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-85473-36 MSD  
Matrix: Solid  
Analysis Batch: 125211

Client Sample ID: 2013-BSB-8A (8-10)  
Prep Type: Total/NA  
Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Lead - DL	14800		61.8	3947	4 N	mg/Kg	☼	-1764 0	75 - 125	191	20

Lab Sample ID: 600-85473-36 DU  
Matrix: Solid  
Analysis Batch: 125211

Client Sample ID: 2013-BSB-8A (8-10)  
Prep Type: Total/NA  
Prep Batch: 125124

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	14800		11860	F	mg/Kg	☼	22	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-85473-1 DU  
Matrix: Solid  
Analysis Batch: 125061

Client Sample ID: MW-33/2013-FWFS-5B (1-2)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	19		19		%		1	20
Percent Solids	81		81		%		0.3	20

Lab Sample ID: 600-85473-17 DU  
Matrix: Solid  
Analysis Batch: 125061

Client Sample ID: ECO-4A (0-0.5)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	20		20		%		0.2	20
Percent Solids	80		80		%		0.05	20

Lab Sample ID: 600-85473-31 DU  
Matrix: Solid  
Analysis Batch: 125061

Client Sample ID: MW-29A (0-0.5)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	23		23		%		1	20
Percent Solids	77		77		%		0.4	20

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	MQL	MDL	Units	Method
PCB-1016	0.000500	0.000270	mg/L	8082
PCB-1221	0.000500	0.000220	mg/L	8082
PCB-1232	0.000500	0.0000600	mg/L	8082
PCB-1242	0.000500	0.0000800	mg/L	8082
PCB-1248	0.000500	0.000100	mg/L	8082
PCB-1254	0.000500	0.0000700	mg/L	8082
PCB-1260	0.000500	0.000170	mg/L	8082

## Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Cadmium	0.00500	0.000350	mg/L	6010B
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B
Selenium	2.00	0.259	mg/Kg	6010B

## General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## GC Semi VOA

### Prep Batch: 125237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-27	RINSE BLANK GEO	Total/NA	Water	3510C	
LCS 600-125237/3-A	Lab Control Sample	Total/NA	Water	3510C	
MB 600-125237/1-A	Method Blank	Total/NA	Water	3510C	

### Analysis Batch: 125450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-27	RINSE BLANK GEO	Total/NA	Water	8082	125237
LCS 600-125237/3-A	Lab Control Sample	Total/NA	Water	8082	125237
MB 600-125237/1-A	Method Blank	Total/NA	Water	8082	125237

## Metals

### Prep Batch: 125065

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-27	RINSE BLANK GEO	Total/NA	Water	3010A	
600-85473-40	RINSE BLANK GEO	Total/NA	Water	3010A	
LCS 600-125065/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-125065/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 125089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-1	MW-33/2013-FWFS-5B (1-2)	Total/NA	Solid	3050B	
600-85473-3	MW-33/2013-FWFS-5B (4-5)	Total/NA	Solid	3050B	
600-85473-3 - DL	MW-33/2013-FWFS-5B (4-5)	Total/NA	Solid	3050B	
600-85473-4	F-5D (0.0-0.25)	Total/NA	Solid	3050B	
600-85473-6	F-5E (0.0-0.25)	Total/NA	Solid	3050B	
600-85473-8	F-5B (0.0-0.25)	Total/NA	Solid	3050B	
600-85473-10	F-5A (0.0-0.25)	Total/NA	Solid	3050B	
600-85473-12	F-5C (0.0-0.25)	Total/NA	Solid	3050B	
600-85473-14	SRB-VS-9E (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-15	SRB-VS-11A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-16	ECO-10A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-16 DU	ECO-10A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-16 MS	ECO-10A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-16 MSD	ECO-10A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-17	ECO-4A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-19	E-11D (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-20	2013-NT-01 (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-21	2013-NT-01 (0.5-2)	Total/NA	Solid	3050B	
600-85473-22	E-12A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-23	2013-NT-02 (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-24	2013-NT-02 (0.5-2))	Total/NA	Solid	3050B	
600-85473-25	E-13A (0.0-0.5)	Total/NA	Solid	3050B	
600-85473-26	E-14A (0.0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-125089/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-125089/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-27	RINSE BLANK GEO	Total/NA	Water	6010B	125065

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Metals (Continued)

### Analysis Batch: 125111 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-40	RINSE BLANK GEO	Total/NA	Water	6010B	125065
LCS 600-125065/2-A	Lab Control Sample	Total/NA	Water	6010B	125065
MB 600-125065/1-A	Method Blank	Total/NA	Water	6010B	125065

### Prep Batch: 125124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-28	MW-27E (0-1)	Total/NA	Solid	3050B	
600-85473-31	MW-29A (0-0.5)	Total/NA	Solid	3050B	
600-85473-32	DUP-10	Total/NA	Solid	3050B	
600-85473-33	DUP-11	Total/NA	Solid	3050B	
600-85473-34	2013-FWFS-SA (0-2)	Total/NA	Solid	3050B	
600-85473-34 DU	2013-FWFS-SA (0-2)	Total/NA	Solid	3050B	
600-85473-34 MS	2013-FWFS-SA (0-2)	Total/NA	Solid	3050B	
600-85473-34 MSD	2013-FWFS-SA (0-2)	Total/NA	Solid	3050B	
600-85473-36 - DL	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-36 DU - DL	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-36 DU	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-36 MS	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-36 MSD - DL	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-36 MSD	2013-BSB-8A (8-10)	Total/NA	Solid	3050B	
600-85473-37	2013-FWCS-12A (2-2.7)	Total/NA	Solid	3050B	
600-85473-38 - DL	2013-MW-17B (0-0.5)	Total/NA	Solid	3050B	
600-85473-38	2013-MW-17B (0-0.5)	Total/NA	Solid	3050B	
600-85473-39	SCC-10B (0-0.5)	Total/NA	Solid	3050B	
600-85473-41	ECO04B (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-125124/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-125124/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-1	MW-33/2013-FWFS-5B (1-2)	Total/NA	Solid	6010B	125089
600-85473-3	MW-33/2013-FWFS-5B (4-5)	Total/NA	Solid	6010B	125089
600-85473-3 - DL	MW-33/2013-FWFS-5B (4-5)	Total/NA	Solid	6010B	125089
600-85473-4	F-5D (0.0-0.25)	Total/NA	Solid	6010B	125089
600-85473-6	F-5E (0-0.25)	Total/NA	Solid	6010B	125089
600-85473-8	F-5B (0-0.25)	Total/NA	Solid	6010B	125089
600-85473-10	F-5A (0-0.25)	Total/NA	Solid	6010B	125089
600-85473-12	F-5C (0-0.25)	Total/NA	Solid	6010B	125089
600-85473-14	SRB-VS-9E (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-15	SRB-VS-11A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-16	ECO-10A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-16 DU	ECO-10A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-16 MS	ECO-10A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-16 MSD	ECO-10A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-17	ECO-4A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-19	E-11D (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-20	2013-NT-01 (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-21	2013-NT-01 (0.5-2)	Total/NA	Solid	6010B	125089
600-85473-22	E-12A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-23	2013-NT-02 (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-24	2013-NT-02 (0.5-2))	Total/NA	Solid	6010B	125089

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Metals (Continued)

### Analysis Batch: 125211 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-25	E-13A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-26	E-14A (0-0.5)	Total/NA	Solid	6010B	125089
600-85473-28	MW-27E (0-1)	Total/NA	Solid	6010B	125124
600-85473-31	MW-29A (0-0.5)	Total/NA	Solid	6010B	125124
600-85473-32	DUP-10	Total/NA	Solid	6010B	125124
600-85473-33	DUP-11	Total/NA	Solid	6010B	125124
600-85473-34	2013-FWFS-SA (0-2)	Total/NA	Solid	6010B	125124
600-85473-34 DU	2013-FWFS-SA (0-2)	Total/NA	Solid	6010B	125124
600-85473-34 MS	2013-FWFS-SA (0-2)	Total/NA	Solid	6010B	125124
600-85473-34 MSD	2013-FWFS-SA (0-2)	Total/NA	Solid	6010B	125124
600-85473-36 - DL	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-36 DU	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-36 DU - DL	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-36 MS	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-36 MSD	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-36 MSD - DL	2013-BSB-8A (8-10)	Total/NA	Solid	6010B	125124
600-85473-37	2013-FWCS-12A (2-2.7)	Total/NA	Solid	6010B	125124
600-85473-38	2013-MW-17B (0-0.5)	Total/NA	Solid	6010B	125124
600-85473-38 - DL	2013-MW-17B (0-0.5)	Total/NA	Solid	6010B	125124
600-85473-39	SCC-10B (0-0.5)	Total/NA	Solid	6010B	125124
600-85473-41	ECO04B (0-0.5)	Total/NA	Solid	6010B	125124
LCSSRM 600-125089/2-A	Lab Control Sample	Total/NA	Solid	6010B	125089
LCSSRM 600-125124/2-A	Lab Control Sample	Total/NA	Solid	6010B	125124
MB 600-125089/1-A	Method Blank	Total/NA	Solid	6010B	125089
MB 600-125124/1-A	Method Blank	Total/NA	Solid	6010B	125124

## General Chemistry

### Analysis Batch: 125061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-1	MW-33/2013-FWFS-5B (1-2)	Total/NA	Solid	Moisture	
600-85473-1 DU	MW-33/2013-FWFS-5B (1-2)	Total/NA	Solid	Moisture	
600-85473-3	MW-33/2013-FWFS-5B (4-5)	Total/NA	Solid	Moisture	
600-85473-4	F-5D (0.0-0.25)	Total/NA	Solid	Moisture	
600-85473-6	F-5E (0-0.25)	Total/NA	Solid	Moisture	
600-85473-8	F-5B (0-0.25)	Total/NA	Solid	Moisture	
600-85473-10	F-5A (0-0.25)	Total/NA	Solid	Moisture	
600-85473-12	F-5C (0-0.25)	Total/NA	Solid	Moisture	
600-85473-14	SRB-VS-9E (0-0.5)	Total/NA	Solid	Moisture	
600-85473-15	SRB-VS-11A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-16	ECO-10A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-17	ECO-4A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-17 DU	ECO-4A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-19	E-11D (0-0.5)	Total/NA	Solid	Moisture	
600-85473-20	2013-NT-01 (0-0.5)	Total/NA	Solid	Moisture	
600-85473-21	2013-NT-01 (0.5-2)	Total/NA	Solid	Moisture	
600-85473-22	E-12A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-23	2013-NT-02 (0-0.5)	Total/NA	Solid	Moisture	
600-85473-24	2013-NT-02 (0.5-2))	Total/NA	Solid	Moisture	
600-85473-25	E-13A (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston

## QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

### General Chemistry (Continued)

#### Analysis Batch: 125061 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85473-26	E-14A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-28	MW-27E (0-1)	Total/NA	Solid	Moisture	
600-85473-31	MW-29A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-31 DU	MW-29A (0-0.5)	Total/NA	Solid	Moisture	
600-85473-32	DUP-10	Total/NA	Solid	Moisture	
600-85473-33	DUP-11	Total/NA	Solid	Moisture	
600-85473-34	2013-FWFS-SA (0-2)	Total/NA	Solid	Moisture	
600-85473-34 MS	2013-FWFS-SA (0-2)	Total/NA	Solid	Moisture	
600-85473-34 MSD	2013-FWFS-SA (0-2)	Total/NA	Solid	Moisture	
600-85473-36	2013-BSB-8A (8-10)	Total/NA	Solid	Moisture	
600-85473-36 MS	2013-BSB-8A (8-10)	Total/NA	Solid	Moisture	
600-85473-36 MSD	2013-BSB-8A (8-10)	Total/NA	Solid	Moisture	
600-85473-37	2013-FWCS-12A (2-2.7)	Total/NA	Solid	Moisture	
600-85473-38	2013-MW-17B (0-0.5)	Total/NA	Solid	Moisture	
600-85473-39	SCC-10B (0-0.5)	Total/NA	Solid	Moisture	
600-85473-41	ECO04B (0-0.5)	Total/NA	Solid	Moisture	

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: MW-33/2013-FWFS-5B (1-2)**

**Date Collected: 01/10/14 16:00**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-1**

**Matrix: Solid**

**Percent Solids: 81.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125211	01/17/14 13:56	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: MW-33/2013-FWFS-5B (4-5)**

**Date Collected: 01/10/14 16:04**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-3**

**Matrix: Solid**

**Percent Solids: 73.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	125211	01/17/14 14:05	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.02 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.02 g	50 mL	125211	01/17/14 16:12	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: F-5D (0.0-0.25)**

**Date Collected: 01/10/14 13:38**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-4**

**Matrix: Solid**

**Percent Solids: 75.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	125211	01/17/14 14:08	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: F-5E (0-0.25)**

**Date Collected: 01/10/14 13:42**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-6**

**Matrix: Solid**

**Percent Solids: 68.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125211	01/17/14 14:10	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: F-5B (0-0.25)**

**Date Collected: 01/10/14 13:47**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-8**

**Matrix: Solid**

**Percent Solids: 73.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:13	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: F-5A (0-0.25)**

**Date Collected: 01/10/14 13:49**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-10**

**Matrix: Solid**

**Percent Solids: 72.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125211	01/17/14 14:15	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: F-5C (0-0.25)**

**Date Collected: 01/10/14 13:51**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-12**

**Matrix: Solid**

**Percent Solids: 70.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125211	01/17/14 14:17	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: SRB-VS-9E (0-0.5)**

**Date Collected: 01/10/14 14:08**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-14**

**Matrix: Solid**

**Percent Solids: 80.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:20	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: SRB-VS-11A (0-0.5)**

**Date Collected: 01/10/14 14:16**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-15**

**Matrix: Solid**

**Percent Solids: 83.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125211	01/17/14 14:22	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: ECO-10A (0-0.5)**

**Date Collected: 01/10/14 14:43**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-16**

**Matrix: Solid**

**Percent Solids: 85.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:24	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: ECO-4A (0-0.5)**

**Date Collected: 01/10/14 15:10**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-17**

**Matrix: Solid**

**Percent Solids: 80.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	125211	01/17/14 14:41	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: E-11D (0-0.5)**

**Date Collected: 01/10/14 15:45**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-19**

**Matrix: Solid**

**Percent Solids: 75.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125211	01/17/14 14:44	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-NT-01 (0-0.5)**

**Date Collected: 01/10/14 15:58**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-20**

**Matrix: Solid**

**Percent Solids: 76.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:46	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-NT-01 (0.5-2)**

**Date Collected: 01/10/14 15:59**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-21**

**Matrix: Solid**

**Percent Solids: 74.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:48	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: E-12A (0-0.5)**

**Date Collected: 01/10/14 16:01**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-22**

**Matrix: Solid**

**Percent Solids: 77.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	125211	01/17/14 14:51	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: 2013-NT-02 (0-0.5)**

**Lab Sample ID: 600-85473-23**

**Date Collected: 01/10/14 16:15**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 75.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 14:53	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-NT-02 (0.5-2))**

**Lab Sample ID: 600-85473-24**

**Date Collected: 01/10/14 16:16**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 77.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125211	01/17/14 14:56	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: E-13A (0-0.5)**

**Lab Sample ID: 600-85473-25**

**Date Collected: 01/10/14 16:22**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 76.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125211	01/17/14 14:58	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: E-14A (0-0.5)**

**Lab Sample ID: 600-85473-26**

**Date Collected: 01/10/14 16:30**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 71.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	125089	01/16/14 10:03	TWR	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	125211	01/17/14 15:07	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: RINSE BLANK GEO**

**Lab Sample ID: 600-85473-27**

**Date Collected: 01/10/14 08:30**

**Matrix: Water**

**Date Received: 01/14/14 10:21**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			125 mL	5.0 mL	125237	01/17/14 14:01	LMB	TAL HOU
Total/NA	Analysis	8082		1	125 mL	5.0 mL	125450	01/20/14 15:39	JAL	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	125065	01/15/14 16:45	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	125111	01/16/14 16:14	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: MW-27E (0-1)**

**Date Collected: 01/13/14 08:42**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-28**

**Matrix: Solid**

**Percent Solids: 77.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	125211	01/17/14 12:49	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: MW-29A (0-0.5)**

**Date Collected: 01/13/14 08:52**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-31**

**Matrix: Solid**

**Percent Solids: 76.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125211	01/17/14 12:51	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: DUP-10**

**Date Collected: 01/13/14 00:00**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-32**

**Matrix: Solid**

**Percent Solids: 76.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125211	01/17/14 12:54	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: DUP-11**

**Date Collected: 01/13/14 00:00**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-33**

**Matrix: Solid**

**Percent Solids: 87.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125211	01/17/14 13:03	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-FWFS-SA (0-2)**

**Date Collected: 01/13/14 09:12**

**Date Received: 01/14/14 10:21**

**Lab Sample ID: 600-85473-34**

**Matrix: Solid**

**Percent Solids: 80.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125211	01/17/14 13:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: 2013-BSB-8A (8-10)**

**Lab Sample ID: 600-85473-36**

**Date Collected: 01/13/14 09:50**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 77.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.07 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.07 g	50 mL	125211	01/17/14 16:00	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-FWCS-12A (2-2.7)**

**Lab Sample ID: 600-85473-37**

**Date Collected: 01/13/14 11:05**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 76.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	125211	01/17/14 13:25	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-MW-17B (0-0.5)**

**Lab Sample ID: 600-85473-38**

**Date Collected: 01/13/14 11:51**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 80.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125211	01/17/14 13:34	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.05 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.05 g	50 mL	125211	01/17/14 16:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: SCC-10B (0-0.5)**

**Lab Sample ID: 600-85473-39**

**Date Collected: 01/13/14 12:04**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 77.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125211	01/17/14 13:37	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: RINSE BLANK GEO**

**Lab Sample ID: 600-85473-40**

**Date Collected: 01/13/14 13:15**

**Matrix: Water**

**Date Received: 01/14/14 10:21**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	125065	01/15/14 16:45	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	125111	01/16/14 16:21	DCL	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

**Client Sample ID: ECO04B (0-0.5)**

**Lab Sample ID: 600-85473-41**

**Date Collected: 01/13/14 13:48**

**Matrix: Solid**

**Date Received: 01/14/14 10:21**

**Percent Solids: 74.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	125124	01/16/14 13:47	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125211	01/17/14 13:39	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85473-1

## Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-15
Louisiana	NELAP	6	30643	06-30-15 *
Oklahoma	State Program	6	1309	08-31-15
Texas	NELAP	6	T104704223	10-31-15
USDA	Federal		P330-14-00192	06-06-17
Utah	NELAP	8	TX00083	11-30-15

\* Certification renewal pending - certification considered valid.

TestAmerica Houston

# TestAmerica Houston

3310 Rothway Street

Houston, TX 77040

## Client Information

Client Contact:  
Christina Higginbotham

Phone: 281-821-6868 (Tel) 281-821-6870 (Fax)

E-Mail: dean.joines@testamericainc.com

Company: Golder Associates Inc.

Address: 500 Century Plaza Drive Suite 190

City: Houston

State, Zip: TX, 77073

PO #: 281-821-6868 (Tel) 281-821-6870 (Fax)

WO #: Christina.Higginbotham@golder.com

Project Name: Exide Recycling Center, Frisco TX Project

Site: ENOC-FRISO

## Chain of Custody Record

Carrier Tracking No(s):

Lab PM: 817-808-8144

E-Mail: dean.joines@testamericainc.com

Analysis Requested				Job #	
Due Date Requested:				1302086	
TAT Requested (days):				5 WD TRRP	
PO #:				817-808-8144	
Purchase Order Requested					
WO #:					
Project #:				60004831	
Exide Recycling Center, Frisco TX Project					
Site: ENOC-FRISO					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code: (1=Freeze, 2=Refrigerate, 3=Room Temp)
FW-33/2013-FWFS-5B (1-2)	01/10/14	1600	G	Solid	
FW-33/2013-FWFS-5B (2-4)	01/10/14	1602	G	Solid	
FW-33/2013-FWFS-5B (4-5)	01/10/14	1604	G	Solid	
F-6D (0-0.25)	01/10/14	1338	G	Solid	
F-5D (1)	01/10/14	1339	G	Solid	
F-5E (0-0.25)	01/10/14	1342	G	Solid	
F-5E (1)	01/10/14	1343	G	Solid	
F-5B (0-0.25)	01/10/14	1347	G	Solid	
F-5B (1)	01/10/14	1348	G	Solid	
F-5A (0-0.25)	01/10/14	1349	G	Solid	
F-5A (1)	01/10/14	1350	G	Solid	
<div> <div> <input type="checkbox"/> Non-Hazardous                     <input type="checkbox"/> Flammable                     <input type="checkbox"/> Skin Irritant                 </div> <div> <input type="checkbox"/> Poison B                     <input type="checkbox"/> Unknown                     <input type="checkbox"/> Radiological                 </div> </div>					
<div> <div> <input type="checkbox"/> Deliverable Requested: I, II, III, IV, Other (specify)                     </div> <div> <input type="checkbox"/> Empty Kit Relinquished by:                     <div>                         Date/Time: 01/13/14 1500                          Received by: J. J. Jansen                          Company: J. J. Jansen                     </div> </div> </div>					
<div> <div> <input type="checkbox"/> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)                     </div> <div> <input type="checkbox"/> Return To Client                     <input type="checkbox"/> Disposal By Lab                     <input type="checkbox"/> Archive For _____ Months                 </div> </div>					
<div> <div> <input type="checkbox"/> Special Instructions/QC Requirements:                     </div> <div> <input type="checkbox"/> Method of Shipment:                     <div>                         Date/Time: 1/13/14 1500                          Received by: J. J. Jansen                          Company: J. J. Jansen                     </div> </div> </div>					
<div> <div> <input type="checkbox"/> Cooler Temperature(s) °C and Other Remarks:                     </div> <div> <input type="checkbox"/> Custody Seal No.:                     <div>                         Date/Time: 1/13/14 1700                          Received by: J. J. Jansen                          Company: J. J. Jansen                     </div> </div> </div>					

Preservation Codes:

- A - HCL
- B - NaOH
- C - Zn Acetate
- D - Nitric Acid
- E - NaHSO4
- F - MeOH
- G - Amchlor
- H - Ascorbic Acid
- I - Ice
- J - DI Water
- K - EDTA
- L - EDA
- M - Hexane
- N - None
- O - AsNaO2
- P - Na2O4S
- Q - Na2SO3
- R - Na2S2O3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4.5
- X - EDTA
- Y - other (specify)
- Z - other (specify)

Total Number of containers

Special Instructions/Note:

HOLD

HOLD

HOLD

HOLD

HOLD

TestAmerica Houston  
6310 Rothway Street  
Houston, TX 77040

## Chain of Custody Record

Carrier Tracking No(s):		COC No: 600-25571-9015.1																		
Lab PM:		Page: 2																		
E-Mail: dean.joines@testamericainc.com		Job #:																		
<b>Client Information</b>																				
Company: Christina Higginbotham																				
Address: 500 Century Plaza Drive Suite 190																				
City: Houston																				
State: TX																				
Zip: 77073																				
Phone: 281-821-6868(Tel) 281-821-6870(Fax)																				
Email: Christina.Higginbotham@golder.com																				
Project Name: Exide Recycling Center, Frisco TX Project																				
Site: EXIDE-FRISCO																				
<b>Analysis Requested</b>																				
Due Date Requested:																				
TAT Requested (days): 5 WD TRRP																				
PO #: Purchase Order Requested																				
WO #: 60004831																				
Project #: 60004831																				
SSOW#:																				
<b>Sample Identification</b>																				
Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=other, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	8270C - (MOD) Target Compound List	8270C - (MOD) PAH List	TX_1005 - Local Method	TX_1005 - Local Method (Hold for TPH 1005 results)	9065 - 28D - Sulfate	6010B - Cd, Pb	6010B - As, Cd, Pb, Se	Moisture	8082 PCB	Total Number of Containers	Preservation Codes:	Special Instructions/Note:	
F-5C (0-0.25)	01/10/14	1351	G	Solid															A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
F-5C (1)	01/10/14	1352	G	Solid																
SRB-VS-9E (0-0.5)	01/10/14	1408	G	Solid																
SRB-VS-11A (0-0.5)	01/10/14	1416	G	Solid																
EC0-10A (0-0.5)	01/10/14	1443	G	Solid																
EC0-4A (0-0.5)	01/10/14	1510	G	Solid																
EC0-4A (0.5-2)	01/10/14	1511	G	Solid																
EC-11D (0-0.5)	01/10/14	1545	G	Solid																
2013-NT-01 (0-0.5)	01/10/14	1558	G	Solid																
2013-NT-01 (0.2-2)	01/10/14	1559	G	Solid																
E-12A (0-0.5)	01/10/14	1601	G	Solid																
<b>Possible Hazard Identification</b>				<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological				<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:				Special Instructions/QC Requirements:				Special Instructions/QC Requirements:								
Empty Kit Relinquished by:				Date:				Time:				Method of Shipment:								
Relinquished by: JOSHUA JANZEN				Date: 01/13/14				Time: 1500				Company: GOLDER								
Relinquished by: J. McCowan				Date: 01/13/14				Time: 1700				Company: GOLDER								
Relinquished by: J. McCowan				Date: 01/13/14				Time: 1700				Company: GOLDER								
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:												

Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

[illegible]

Custody Seal No.:

$\Delta$	Yes	$\Delta$	No
----------	-----	----------	----

Cooler Temperature(s) °C and Other Remarks:

100

# TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b> Client Contact: Christina Higginbotham Company: Golder Associates Inc. Address: 500 Century Plaza Drive Suite 190 City: Houston State, Zip: TX, 77073 Phone: 281-821-6888 (Tel) 281-821-6870 (Fax) Email: Christina.Higginbotham@golder.com Project Name: Exide Recycling Center, Frisco TX Project Site: EXIDE-PRSCO		Sampler: CHRIS TREWNO Lab PM: Joiner, Dean A Phone: 817-808-8144 E-Mail: dean.joiner@testamericainc.com		SOC No: 600-25571-9015.1 Carrier Tracking No(s): Page: 4 Job #: 1302066													
<b>Analysis Requested</b> Due Date Requested: TAT Requested (days): 5 WD TRRP PO #: Purchase Order Requested WO #: Project # 60004831 SSOW#																	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=overstall, BT=Breath, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	8270C_LL - (MOD) PAH List	TX_1005 - Local Method	TX_1006 - Local Method (Hold for TPH 1005 results)	9056_28D - Sulfate	6010B - Cd, Pb	6010B - As, Cd, Pb, Se	Moisture	8082 PCB	Total Number of Containers	Special Instructions/Note:
2013-FWFS-SA(0-2)	01/13/14	0912	G	Solid													
2013-FWFS-SA(0-2)MS	01/13/14	0912	G	Solid													
2013-FWFS-SA(0-2)MSO	01/13/14	0912	G	Solid													
2013-FWFS-SA(2-4)	01/13/14	0913	G	Solid													
2013-B5B-8A(8-10)	01/13/14	0950	G	Solid													HOLD
2013-B5B-8A(8-10)MS	01/13/14	0950	G	Solid													
2013-B5B-8A(8-10)MSH	01/13/14	0950	G	Solid													
2013-FWFS-12A(2-2.7)	01/13/14	1105	G	Solid													
2013-MW-17B(0-0.5)	01/13/14	1151	G	Solid													
SLC-10B(0-0.5)	01/13/14	1204	G	Solid													
ELN5E BLANK ASD	01/13/14	1315	G	Solid													
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)																	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:																	
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: JESSICA JANZEN Date/Time: 01/13/14 1500 Company: Golder Relinquished by: J. McConna Date/Time: 1/13/14 1700 Company: Golder Relinquished by: _____ Date/Time: _____ Company: _____ Custody Seal No.: _____ Custody Seals Intact: A Yes A No Cooler Temperature(s) °C and Other Remarks:																	





**Upton, Cathy**

**From:** Upton, Cathy  
**Sent:** Tuesday, March 04, 2014 3:13 PM  
**To:** Upton, Cathy  
**Subject:** FW: Additional Metals in Soil

Dean,

We would like to report all five metals for the samples listed below. Do you think we could get revised reports for these by Wednesday?

Location ID	Sample ID	lab_sample_id	Date Sampled	Antimony	Arsenic	Cadmium
2013-SL-C15	2013-SL-C15 (0-6)	600-84633-7	2013-12-19	NA	NA	2.10
MW-42	MW-42 (0.5-2)	600-85318-20	2014-01-08	NA	13.9	1.82
MW-27B	MW-27B (0-2)	600-85318-24	2014-01-09	NA	NA	9.85
D-11A	D11A (0-0.5)	600-85318-30	2014-01-09	NA	<b>27.2</b>	1.77
2013-BSA-2A	2013-BSA-2A(0-2)	600-85318-36	2014-01-09	NA	<b>34.9</b>	16.5
ECO-2A	ECO-2A (0-0.5)	600-85389-18	2014-01-09	NA	NA	3.29
ECO-8A	ECO-8A (0-0.5)	600-85389-20	2014-01-09	NA	NA	5.65
2013-AD-3	2013-AD-03 (0-0.5)	600-85389-23	2014-01-09	NA	NA	1.51
SCC-5B	SCC-5B (0-0.5)	600-85389-29	2014-01-10	NA	NA	2.48
2013-CUFT-10B	2013-CUFT-10B (0-0.5)	600-85389-63	2014-01-10	NA	NA	2.19
SRB-VS-11A	SRB-VS-11A (0-0.5)	600-85473-15	2014-01-10	NA	NA	1.44
2013-FWFS-5A	2013-FWFS-5A (0-2)	600-85473-34	2014-01-13	NA	NA	0.52
2013-MW-17B	2013-MW-17B (0-0.5)	600-85473-38	2014-01-13	NA	NA	5.19
SCC-10B	SCC-10B (0-0.5)	600-85473-39	2014-01-13	NA	NA	1.85
2013-C2L-06	2013-C2L-06 (0-0.5)	600-85636-21	2014-01-14	NA	<b>22.6</b>	3.68
ECO-7D	ECO-7D (0-0.5)	600-85636-39	2014-01-14	NA	15.1	2.30

Thanks,  
 Anne



**Anne Faeth-Boyd, R.G., P.E.** | Senior Project Engineer | **Golder Associates Inc.**

820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301

**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
**www.golder.com**

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**Upton, Cathy**

**From:** Faeth-Boyd, Anne [Anne\_Faeth-Boyd@golder.com]  
**Sent:** Thursday, March 27, 2014 3:52 PM  
**To:** Upton, Cathy  
**Cc:** Joiner, Dean; Higginbotham, Christina; Forthaus, Brett; Thomas, Jim  
**Subject:** Additional Metals Reporting  
**Follow Up Flag:** Follow up  
**Flag Status:** Blue

Cathy,

Could you please send revised reports to include all five metals (lead, cadmium, arsenic, antimony, selenium) for the following samples:

2013-AD-03 (0.5-2)	600-85389-24	2014-01-09
2013-C2L-06 (1-2)	600-85636-22	2014-01-14
2013-CUFT-5B (0-0.5)	600-85389-36	2014-01-10
2013-NT-02 (0-0.5)	600-85473-23	2014-01-10
2013-SDA-4B (0-0.5)	600-85389-28	2014-01-10
E-11C (0-0.5)	600-85318-29	2014-01-09
ECO-10A (0-0.5)	600-85473-16	2014-01-10
ECO-1A (0-0.5)	600-85389-16	2014-01-09
ECO-2A (0-0.5)	600-85389-18	2014-01-09
ECO-4B (0-0.5)	600-85473-41	2014-01-13
SRB-VS-9E (0-0.5)	600-85473-14	2014-01-10

Thanks,  
Anne

---

**Anne Faeth-Boyd, R.G., P.E.** | Senior Project Engineer | **Golder Associates Inc.**

820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301

**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) | [www.golder.com](http://www.golder.com)

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**Upton, Cathy**

**From:** Higginbotham, Christina [Christina\_Higginbotham@golder.com]  
**Sent:** Tuesday, May 06, 2014 5:02 PM  
**To:** Upton, Cathy; Joiner, Dean  
**Cc:** Thomas, Jim; Faeth-Boyd, Anne  
**Subject:** Exide discrepancies - metals reporting  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy and Dean,

The below revisions are being requested so the final laboratory reports are consistent with tabulated data that was already submitted.

It appears that some metals noted below were reported in an earlier package, and removed for the later data packages. We would like the specified data (see highlights) turned back "on" please.

Please let us know estimated time for these revisions, or if you have any questions regarding this request.

Thanks,  
 Christina

**600-85636 REVISION**

				Sb	As	Cd	Pb	Se		
2013-STB-4A	2013-STB-4A (2-4)	600-85636-1	2014-01-13	NA	NA	NA	NA	1540	NA	REPORT CADMIUM (confirm Cd concentrat

**600-85318 REVISIONS**

2013-C2L-03	2013-C2L-03-(0-0.5)	600-85318-33	2014-01-09	NA	12.2	0.651	79.5	< 0.330 U	REPORT ARSENIC AND SELENIUM
D-12A	D12A (0-0.5)	600-85318-31	2014-01-09	NA	10.9	0.652 b	80.2	< 0.324 U	REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se
MW-41	MW-41 (0.5-2)	600-85318-18	2014-01-08	NA	10.1	0.810	92.5	< 0.338 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-41	MW-41 (0-0.5)	600-85318-17	2014-01-08	NA	8.00	0.474	18.4	< 0.323 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	DUP-6	600-85318-21	2014-01-08	NA	7.39	0.385	15.0	< 0.311 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	MW-42 (0-0.5)	600-85318-19	2014-01-08	NA	14.2	1.56	230	0.580 J	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
									REPORT ARSENIC AND SELENIUM

**600-85473 REVISIONS**

2013-NT-01	2013-NT-01 (0.2-2)	600-85473-21	2014-01-10	NA	14.4	0.618	18.5	0.546 J	Report from 1/22 has results for As and Se. only lists Pb and Cd, 4/21 only lists Cd and F
2013-NT-01	2013-NT-01 (0-0.5)	600-85473-20	2014-01-10	NA	15.9	0.571	19.5	< 0.328 U	REPORT ARSENIC AND SELENIUM , also ple interval to "0.5-2" instead of "0.2-2". Report from 1/22 reports As and Se. Rev 3 4/21 does not.
2013-NT-02	2013-NT-02 (0.5-2)	600-85473-24	2014-01-10	NA	14.1	0.354	21.2	0.324 J	REPORT ARSENIC AND SELENIUM Report from 1/22 reports As and Se. Rev 3 4/21 does not.
2013-NT-02	2013-NT-02 (0-0.5)	600-85473-23	2014-01-10	NA	14.9	4.89	837	0.654 J	REPORT ARSENIC AND SELENIUM Report from 1/22 reports As and Se. Rev 3 4/21 does not.
									REPORT ARSENIC AND SELENIUM

**600-85389 REVISION**

2013-WMU14-1A (5-7)	600-85389-12	1/9/2014	na	na	5.14 J	17000	na	REPORT CADMIUM (confirm Cd concentratio
DUP-7	600-85389-14	1/9/2014	na	na	na	10500	na	REPORT CADMIUM (if 85389-12 is confirmed

Christina Higginbotham, P.G. | Remediation Project Manager | Golder Associates Inc.

500 Century Plaza Drive, Suite 190, Houston, Texas, USA 77073

T: +1 (281) 821-6868 | F: +1 (281) 821-6870 | C: +1 (281) 620-7835 | E: [CHigginbotham@golder.com](mailto:CHigginbotham@golder.com) | [www.golder.com](http://www.golder.com)

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# 

Client: Golder Associates Inc.

Job Number: 600-85473-1

**Login Number: 85473**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Capps, Dana R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.2/3.3
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

---

<b>Sample Dates:</b>	January 9 & 10, 2014	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

---

## TESTS/ METHODS

Polychlorinated Biphenyls (PCBs) by SW-846 8082 – Gas Chromatography (GC)

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)

## SAMPLES

36 soil samples (one of which was subjected to Synthetic Precipitation Leaching Procedure (SPLP)), 3 field duplicates, 1 equipment rinsate blank, 4 field MS/MSD pairs. See Table 1 for a complete cross-referenced listing of samples.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.

The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures



## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

- Results Reporting Procedures
- Laboratory and Field QC Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13;
- Organics: 60-140% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 40% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or ‘see’ in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or ‘see’ in a given sample. For TRRP, non-detects



## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the Unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report.

## USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1  $^{Tot}Soil_{Comb}$  and Tier 1, 2 or 3  $^{GW}Soil_{Ing}$  PCLs for a 30-acre source area. As needed per TRRP, the Unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria.
2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high can be used; however, the reported concentration may be high. Detects that are



estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.

Reviewer: Jing Song Xi 8/25/2015

## **QUALITY CONTROL PARAMETERS AND OUTCOMES**

### **Data Completeness**

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format. Minor revisions were required for work orders 600-85389-4. Minor revisions have been made for work order 600-85389-1 on 6/8/2015. All revisions are detailed in the laboratory narrative.

### **Chain-of-Custody**

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, except as follows:

- Minor instances of containers not matching information listed on the COC. These inconsistencies have been addressed by the laboratory and do not affect sample results.

### **Sample Condition**

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation:

- For 600-85389, the temperatures of the coolers at receipt were 1.5°C and 2.0°C.

### **Field Procedures**

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.

Three field duplicates were collected with the 36 investigative samples. Four site-specific MS/MSD samples were collected. One equipment rinsate blank was collected with the samples.

### **Results Reporting Procedures**

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.





## Data Usability Summary

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Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

**MQLs-** The LORPs have been established by Golder/PBW as the Resident Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte.

**MDLs-** According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

## Laboratory Blanks

Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. There were no detections in laboratory blanks in this work order, except for the following:

- The method blank for QC Batch 124919 contained cadmium above the MDL. All samples in the associated preparation batch have detections greater than 5x MDL, therefore, no qualifications are needed.
- The method blank for QC Batch 127929 contained lead above the MDL. All samples in the associated preparation batch have detections greater than 5x MDL, therefore, no qualifications are needed.

## Field QC Blanks

One equipment rinsate blank was collected to document sufficient field decontamination procedures for soil sampling devices. Results for samples collected with a contaminated rinsate blank may be affected by field contamination. However, no analytes were detected in the rinsate blanks, and thus there is no effect on data quality.

## Laboratory Control Sample

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects, except for the following:



## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

- For Method 8082, aroclors are multi-component analytes and it is impossible to include all seven aroclors of interest into the LCS according to the laboratory. Only aroclors 1016 and 1260 were spiked into the LCS. As these two aroclors contain essentially all analytes found in the other five aroclors of interest, the recovery of these two aroclors in the LCS was taken to be representative of the recovery of the other five aroclors. Aroclors 1016 and 1260 recovered within specified limits.

## Matrix Spike Recovery

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch plus a Post Digestion Spike (PDS) with each metals analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using a sample from the site, which includes 4 MS/MSD for Total Metals, as shown in Table 1.

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
124919	600-85389-12	2013-WMU14-1A (5-7)	Antimony	73.3	66.0, 66.6	-67	-62	JL
124919	600-85389-12	2013-WMU14-1A (5-7)	Arsenic	52.6	66.0, 66.6	37	39	JL
124919	600-85389-12	2013-WMU14-1A (5-7)	Lead	15500	66.0, 66.6	-23248	-23042	-
124919	600-85389-13	MW-30A (2-4)	Antimony	1.55	58.2, 55.4	39	35	JL
124919	600-85389-13	MW-30A (2-4)	Lead	52.4	58.2, 55.4	63	30	JL
127810	600-85389-19	ECO-2A (0.5-2)	Antimony	0.284 U	58.9, 58.3	44	42	UJL
124939	600-85389-30	SCC-5A (0-0.5)	Antimony	0.278	59.6, 64.3	39	40	JL
124939	600-85389-45	2013-CUFT-6C (2-4)	Antimony	0.306	64.3, 66.8	38	38	JL

NA – Not available.

In all cases where the spike amount is less than four times the result in the unspiked parent sample (such as for lead in batch 124919), the data are considered inconclusive and the MS/MSD recovery check is waived.



## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

### Surrogate Recovery

Surrogate recoveries were within acceptable limits for PCBs.

### Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals and pH analytical batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes 4 MSD and MD for Total Metals, as shown in Table 1.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	MSD RPD	MD RPD	Qual
124919	600-85389-12	2013-WMU14-1A (5-7)	Cadmium	5.14	0	46	J
124919	600-85389-13	MW-30A (2-4)	Cadmium	1.15	4	92	J
124919	600-85389-13	MW-30A (2-4)	Lead	52.4	5	101	J
127810	600-8539-19	ECO-2A (0.5-2)	Selenium	0.410 J	3	45	J
124939	600-85389-45	SCC-5A (0-0.5)	Cadmium	0.760	18	85	J
124939	600-85389-45	SCC-5A (0-0.5)	Lead	20.3	8	40	J

### Field Duplicate Precision

Three field duplicates were collected with the samples and analyzed for cadmium and lead. Results are summarized in Table 3. The RPDs (or the absolute difference between results for concentrations <5x MQL and for non-detects) are within the TRRP criteria, which indicates good precision for the sampling, preparation, and analysis technique on the given sample matrix, except as follows:

- The results for Total lead are outside the criteria for the pair collected at 2013-WMU14-1A (5-7).
- The results for Total lead are outside the criteria for the pair collected at MW-30A (2-4).

### Instrument Tuning

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.



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## Data Usability Summary

Test America Work Orders: 600-85389-1, 600-85389-2, 600-85389-3, 600-85389-4

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### Instrument Calibration

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations.

### Instrument Performance

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists, except as follows:

- The interference check standard solution associated with batch 125051 showed results for lead at a level greater than 2 times the LOD. Since this analyte was not detected in the field sample, no qualification was required.

### Internal Standards

According to the LRC, area counts and retention times were within method requirements.

**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Prep Batch/ Analysis Batch	Sample Date	Matrix	Comments
600-85389-1	MW-44 (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-2	MW-44 (0.5-2)		1/9/2014	Soil	Not reported
600-85389-3	MW-44 (2-4)		1/9/2014	Soil	Not reported
600-85389-4	2013-AD-1A (0.5-2)	127810/127873	1/9/2014	Soil	
600-85389-5	2013-AD-1A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-6	2013-AD-1A (2-4)		1/9/2014	Soil	Not reported
600-85389-7	2013-FOP-1A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-8	2013-AD-5 (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-9	2013-AD-5 (0.5-2)	127810/127873	1/9/2014	Soil	
600-85389-10	2013-AD-5 (2-4)		1/9/2014	Soil	Not reported
600-85389-11	2013-WMU14-1A (0.9-2)	124919/125083	1/9/2014	Soil	
600-85389-12	2013-WMU14-1A (5-7)	124919/125083	1/9/2014	Soil	site-specific MS/MSD
600-85389-13	MW-30A (2-4)	124919/125010	1/9/2014	Soil	site-specific MS/MSD
600-85389-14	DUP 7	124919/125083	1/9/2014	Soil	Duplicate of 2013-WMU14-1A (5-7)
600-85389-15	DUP 8	124919/125010	1/9/2014	Soil	Duplicate of MW-30A (2-4)
600-85389-16	ECO-1A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-17	ECO-1A (0.5-2)		1/9/2014	Soil	Not reported
600-85389-18	ECO-2A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-19	ECO-2A (0.5-2)	127810/127873	1/9/2014	Soil	site-specific MS/MSD
600-85389-20	ECO-8A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85389-21	2013-SDA-3B (0-0.5)	124919/125010 128791/128837	1/9/2014	Soil	
600-85389-22	RINSE BLANK-CME	124862/125051	1/10/2014	Water	Rinsate Blank
600-85389-23	2013-AD-03 (0-0.5)	125018/125110 128791/128837	1/9/2014	Soil	
600-85389-24	2013-AD-03 (0.5-2)	127929/127997	1/9/2014	Soil	
600-85389-25	2013-AD-03 (2-4)		1/9/2014	Soil	Not reported
600-85389-26	MW-36 (0-2)	124919/125010	1/10/2014	Soil	
600-85389-27	MW-35 (1-3)	124939/125010	1/10/2014	Soil	
600-85389-28	2013-SDA-4B (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-29	SCC-5B (0-0.5)	124939/125010 128791/128837	1/10/2014	Soil	
600-85389-30	SCC-5A (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-31	2013-CUFT-14 (0-2)	124838/125027 124939/125010	1/10/2014	Soil	
600-85389-32	2013-CUFT-14 (2-4)		1/10/2014	Soil	Not reported
600-85389-33	2013-CUFT-11 (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-34	2013-CUFT-11 (0.5-2)		1/10/2014	Soil	Not reported
600-85389-35	2013-CUFT-11 (2-4)		1/10/2014	Soil	Not reported
600-85389-36	2013-CUFT-5B (0-0.5)	124939/125010 128791/128837	1/10/2014	Soil	
600-85389-37	2013-CUFT-5A (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-38	2013-CUFT-5D (0-0.5)		1/10/2014	Soil	Not reported
600-85389-39	2013-CUFT-5D (2-4)	124939/125010	1/10/2014	Soil	
600-85389-40	2013-CUFT-5D (4-6)		1/10/2014	Soil	Not reported
600-85389-41	2013-CUFT-5D (6-8)		1/10/2014	Soil	Not reported
600-85389-42	2013-CUFT-5D (8-10)		1/10/2014	Soil	Not reported
600-85389-43	2013-CUFT-6A (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-44	2013-CUFT-6C (0-0.5)		1/10/2014	Soil	Not reported
600-85389-45	2013-CUFT-6C (2-4)	124939/125010	1/10/2014	Soil	site-specific MS/MSD
600-85389-46	2013-CUFT-6C (4-6)		1/10/2014	Soil	Not reported
600-85389-47	2013-CUFT-6C (6-8)		1/10/2014	Soil	Not reported
600-85389-48	2013-CUFT-6C (8-10)		1/10/2014	Soil	Not reported
600-85389-49	DUP 9	124939/125010	1/10/2014	Soil	Duplicate of 2013-CUFT-6C (2-4)
600-85389-50	2013-CUFT-6B (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-51	2013-CUFT-5C (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-52	2013-CUFT-7B (0-0.5)	125018/125110	1/10/2014	Soil	
600-85389-53	2013-CUFT-7B (2-4)	124939/125010	1/10/2014	Soil	
600-85389-54	2013-CUFT-7B (4-6)		1/10/2014	Soil	Not reported
600-85389-55	2013-CUFT-7B (6-8)		1/10/2014	Soil	Not reported
600-85389-56	2013-CUFT-7B (8-10)		1/10/2014	Soil	Not reported
600-85389-57	2013-CUFT-10D (0-0.5)		1/10/2014	Soil	Not reported
600-85389-58	2013-CUFT-10D (2-4)	124939/125010	1/10/2014	Soil	
600-85389-59	2013-CUFT-10D (4-6)		1/10/2014	Soil	Not reported
600-85389-60	2013-CUFT-10D (6-8)		1/10/2014	Soil	Not reported
600-85389-61	2013-CUFT-10D (8-10)		1/10/2014	Soil	Not reported
600-85389-62	2013-CUFT-10A (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-63	2013-CUFT-10B (0-0.5)	124939/125010	1/10/2014	Soil	
600-85389-64	2013-CUFT-10C (0-0.5)	124939/125010	1/10/2014	Soil	

TABLE 2 - QUALIFIED DATA

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifier	Explanation
600-85389-1	MW-44 (0-0.5)	Lead	38.6	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-4	2013-AD-1A (0.5-2)	Antimony	<0.258	mg/kg	UJL	Matrix Spike recovery below specifications, >30%
600-85389-5	2013-AD-1A (0-0.5)	Lead	452	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-7	2013-FOP-1A (0-0.5)	Lead	85.1	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-8	2013-AD-5 (0-0.5)	Lead	2320	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-9	2013-AD-5 (0.5-2)	Antimony	8.15	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-11	2013-WMU14-1A (0.9-2)	Lead	35500	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	5.14	mg/kg	J	Matrix duplicate outside specifications
		Lead	17000	mg/kg	J	Field duplicate outside specifications
600-85389-13	MW-30A (2-4)	Lead	52.4	mg/kg	JL	Matrix Spike recovery below specifications, >30%, field duplicate outside specifications
600-85389-14	DUP-7	Lead	10500	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-15	DUP-8	Lead	28.9	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-16	ECO-1A (0-0.5)	Lead	151	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-18	ECO-2A (0-0.5)	Antimony	1.46	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Arsenic	16.3	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Lead	303	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-19	ECO-2A (0.5-2)	Antimony	<0.284	mg/kg	UJL	Matrix Spike recovery below specifications, >30%
		Selenium	0.41	mg/kg	J	Matrix duplicate outside specifications
600-85389-20	ECO-8A (0-0.5)	Antimony	6.70	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Lead	1090	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-21	2013-SDA-3B (0-0.5)	Lead	1000	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-26	MW-36 (0-2)	Lead	3120	mg/kg	JL	Matrix Spike recovery below specifications, >30%
600-85389-29	SCC-5B (0-0.5)	Antimony	3.11	mg/kg	JL	Matrix Spike recovery below specifications, >30%
		Cadmium	0.76	mg/kg	J	Matrix duplicate outside specifications
600-85389-45	2013-CUFT-6C (2-4)	Lead	20.3	mg/kg	J	Matrix duplicate outside specifications
600-85389-63	2013-CUFT-10B (0-0.5)	Antimony	1.19	mg/kg	JL	Matrix Spike recovery below specifications, >30%

## Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data; The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data; The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected; Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data; The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

U Not detected; The analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data; The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low

**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added
DUP-7 / 2013-WMU14-1A (5-7)	lead	17000	10500	47.3	A	J
DUP-8 / MW-30A (2-4)	lead	52.4	28.9	57.8	A	J
DUP-9 / 2013-CUFT-6C (2-4)	cadmium	0.760	0.888	15.5	A	-
	lead	20.3	21.6	6.2	A	-

<sup>a</sup> RPD = ((SR - DR)\*200)/(SR + DR)

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-85389-1

Client Project/Site: Exide Recycling Center

Revision: 5

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/8/2015 7:15:19 PM

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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.

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-85389-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☒ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

3/5/2014

Date

Project Management Asst II

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/5/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85389-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				R05D
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?		X			R06A
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/5/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85389-1
Reviewer Name:	Dean A Joiner		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?		X			S08A
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	3/5/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85389-1
Reviewer Name:	Dean A Joiner		

ER # <sup>1</sup>	Description
R01A	The following samples were listed on the Chain of Custody (COC); however, no samples were received: 2013-AD-03 (0.5-2) (600-85389-24), 2013-AD-03 (0-0.5) (600-85389-23), 2013-AD-03 (2-4) (600-85389-25).
R05D	Method 6010B: The method blank for batch 124919 contained Cadmium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.
R06A	Method 8082: Since Aroclors are multi-component analytes, it is not possible to include all seven Aroclors of interest into the LCS. The only two Aroclors that were spiked into the LCS were Aroclors 1016 and 1260. Since these two Aroclors essentially contain all analytes found in the other five individual Aroclors of interest, the recovery of Aroclors 1016 and 1260 in the LCS will be representative of the recovery of the other five Aroclors.
R07C	Method 6010B: 600-85389-12 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Arsenic, Lead. Matrix interference is suspected. Method 6010B: 600-85389-13 MS/MSD failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected. Method 6010B: 600-85389-30 MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: 600-85389-45 MS/MSD failed the recovery criteria for the following analyte(s): Antimony. Matrix interference is suspected. Method 6010B: Due to the high concentration of lead, the matrix spike / matrix spike duplicate (MS/MSD) for batch 125110 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.
R07D	Method 6010B: 600-85389-13 MSD failed the RPD criteria for the following analyte(s): Lead. Matrix interference is suspected.
R08C	Method 6010B: 600-85389-12 DU failed the RPD criteria for the following analyte(s): Arsenic and Cadmium. Non homogeneity of the sample is suspected. Method 6010B: 600-85389-13 DU failed the RPD criteria for the following analyte(s): Cadmium and Lead. Non homogeneity of the sample is suspected. Method 6010B: 600-85389-45 DU failed the RPD criteria for the following analyte(s): Cadmium and Lead. Non homogeneity of the sample is suspected.
S08A	Method 6010B: The interference check standard solution (ICSA) associated with batch 125051 showed results for arsenic, cadmium and lead at a level greater than 2 times the limit of detection (LOD). Since the interfering analytes were not detected in the client samples, no corrective action was required.
S09A	Method 6010B: The serial dilution performed for the following sample(s) associated with batch 124919 was outside control limits for Antimony: 600-85389-12 SD
<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	

### Detection Check Standard

Matrix: Soil  
Method: 6010B  
Preparation: 3050  
Date Analyzed: 12/30/2013  
Date Prepared: 12/27/2013  
Instrument: Thermo 6500  
TALS Batches: 123949, 123775p  
Prep/Reagent Factor = 50  
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.36	25
Antimony	0.231553	0.45	0.5	2.5
Arsenic	0.217923	0.5	0.53	1
Barium	0.011322	0.03	0.04	1
Beryllium	0.014513	0.02	0.015	0.25
Boron	0.385535	0.6	0.56	20
Cadmium	0.025642	0.05	0.05	0.25
Calcium	0.86399	1.5	2.185	100
Chromium	0.050606	0.1	0.135	0.5
Cobalt	0.067622	0.1	0.09	0.5
Copper	0.173703	0.5	0.64	0.5
Iron	2.534007	4	3.76	20
Lead	0.104832	0.2	0.215	0.5
Selenium	0.258884	0.5	0.465	2
Manganese	0.038111	0.05	0.085	1.5
Molybdenum	0.136448	0.35	0.38	0.5
Nickel	0.116599	0.15	0.2	1
Silver	0.118848	0.2	0.15	0.5
Sodium	0.885548	2.4	3.135	100
Thallium	0.276988	0.7	0.73	1.5
Tin	0.08729	0.15	0.19	1
Titanium	0.014529	0.03	0.01	0.5
Vanadium	0.079068	0.15	0.125	0.5
Zinc	0.108432	0.2	0.305	1.5

### Detection Check Standard

Matrix: Water  
Method: 200.7/6010  
Preparation: 200.7P/3010  
Date Analyzed: 12/31/2013  
Date Prepared: 12/27/2013  
Instrument: Spectro01  
TALs Batches: 124030, 123788p  
Units: mg/L

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.006	0.02	0.028176	0.5
Antimony	0.0063	0.01	0.010016	0.05
Arsenic	0.0033	0.01	0.008253	0.01
Barium	0.0022	0.005	0.004098	0.02
Beryllium	0.00134	0.002	0.004019	0.005
Boron	0.0077	0.02	0.019829	0.2
Cadmium	0.00073	0.001	0.001	0.005
Calcium	0.022	0.05	0.060829	1
Chromium	0.0016	0.002	0.003835	0.01
Cobalt	0.00063	0.001	0.000965	0.01
Copper	0.0014	0.002	0.002451	0.01
Iron	0.087	0.1	0.002258	0.4
Lithium	0.0024	0.005	0.006107	0.2
Lead	0.0029	0.005	0.005478	0.01
Selenium	0.0042	0.01	0.009953	0.04
Manganese	0.00084	0.002	0.001988	0.01
Molybdenum	0.0027	0.005	0.005867	0.01
Nickel	0.00179	0.005	0.005669	0.01
Silver	0.0012	0.0025	0.001901	0.01
Sodium	0.02	0.05	0.088115	1
Strontium	0.0005	0.001	0.000897	0.005
Thallium	0.0078	0.02	0.021503	0.03
Tin	0.0028	0.005	0.005708	0.01
Titanium	0.0011	0.002	0.001905	0.01
Vanadium	0.0017	0.002	0.003578	0.01
Zinc	0.0022	0.005	0.004189	0.01

### Detection Check Standard

Matrix: Soil  
Method: 8082  
Preparation: 3550  
Date Analyzed: 7/18/2013  
Date Prepared: 7/18/2013  
TALs Batches: 600-111090/2,4,5,6,7,8,9-a  
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aroclor 1016	1.6	8.3	7.03	16.7
Aroclor 1221	8.63	16.67	12.33	16.7
Aroclor 1232	6.7	16.67	10.76	16.7
Aroclor 1242	1.6	16.67	9.59	16.7
Aroclor 1248	2.49	16.67	11.92	16.7
Aroclor 1254	2.21	16.67	10.54	16.7
Aroclor 1262	13.5	16.67	14.13	16.7
Aroclor 1260	13.5	8.3	9.16	16.7



## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Job ID: 600-85389-1**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-85389-1

#### Comments

This report was revised February 14, 2014 updating the TRRP check list adding a MS/MSD reference for metals, replacing the final report generated on 01/20/14. The report was again revised on 03/05/14 to report total metals for samples 18, 20, 23, 29 and 63 replacing the final report generated on 02/14/14. The report was revised on 03/25/14 to update the RPD for 8082 LCS/LCSD, replacing the final report generated on 03/05/14. The report was again revised on 05/09/14 to report cadmium for samples 12 and 14 per client request, replacing the final report generated on 03/25/14. See attached email. The report was revised on 06/08/15 to include Antimony for sample 30, replacing the final report generated on 05/09/14.

#### Receipt

The samples were received on 1/11/2014 11:47 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 2.0° C.

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL HOU
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-85389-1	MW-44 (0-0.5)	Solid	01/09/14 12:45	01/11/14 11:47
600-85389-5	2013-AD-1A (0-0.5)	Solid	01/09/14 13:42	01/11/14 11:47
600-85389-7	2013-FOP-1A (0-0.5)	Solid	01/09/14 13:58	01/11/14 11:47
600-85389-8	2013-AD-5 (0-0.5)	Solid	01/09/14 14:12	01/11/14 11:47
600-85389-11	2013-WMU14-1A (0.9-2)	Solid	01/09/14 14:40	01/11/14 11:47
600-85389-12	2013-WMU14-1A (5-7)	Solid	01/09/14 14:44	01/11/14 11:47
600-85389-13	MW-30A (2-4)	Solid	01/09/14 15:08	01/11/14 11:47
600-85389-14	DUP 7	Solid	01/09/14 00:00	01/11/14 11:47
600-85389-15	DUP 8	Solid	01/09/14 00:00	01/11/14 11:47
600-85389-20	ECO-8A (0-0.5)	Solid	01/09/14 15:59	01/11/14 11:47
600-85389-21	2013-SDA-3B (0-0.5)	Solid	01/09/14 16:05	01/11/14 11:47
600-85389-22	RINSE BLANK-CME	Water	01/09/14 08:25	01/11/14 11:47
600-85389-23	2013-AD-03 (0-0.5)	Solid	01/09/14 13:10	01/10/14 10:31
600-85389-26	MW-36 (0-2)	Solid	01/10/14 09:00	01/11/14 11:47
600-85389-27	MW-35 (1-3)	Solid	01/10/14 10:00	01/11/14 11:47
600-85389-29	SCC-5B (0-0.5)	Solid	01/10/14 08:51	01/11/14 11:47
600-85389-30	SCC-5A (0-0.5)	Solid	01/10/14 08:59	01/11/14 11:47
600-85389-31	2013-CUFT-14 (0-2)	Solid	01/10/14 09:13	01/11/14 11:47
600-85389-33	2013-CUFT-11 (0-0.5)	Solid	01/10/14 09:18	01/11/14 11:47
600-85389-37	2013-CUFT-5A (0-0.5)	Solid	01/10/14 09:43	01/11/14 11:47
600-85389-39	2013-CUFT-5D (2-4)	Solid	01/10/14 09:53	01/11/14 11:47
600-85389-43	2013-CUFT-6A (0-0.5)	Solid	01/10/14 10:14	01/11/14 11:47
600-85389-45	2013-CUFT-6C (2-4)	Solid	01/10/14 10:23	01/11/14 11:47
600-85389-49	DUP 9	Solid	01/10/14 00:00	01/11/14 11:47
600-85389-50	2013-CUFT-6B (0-0.5)	Solid	01/10/14 10:41	01/11/14 11:47
600-85389-51	2013-CUFT-5C (0-0.5)	Solid	01/10/14 10:51	01/11/14 11:47
600-85389-52	2013-CUFT-7B (0-0.5)	Solid	01/10/14 11:08	01/11/14 11:47
600-85389-53	2013-CUFT-7B (2-4)	Solid	01/10/14 11:09	01/11/14 11:47
600-85389-58	2013-CUFT-10D (2-4)	Solid	01/10/14 11:26	01/11/14 11:47
600-85389-62	2013-CUFT-10A (0-0.5)	Solid	01/10/14 11:41	01/11/14 11:47
600-85389-63	2013-CUFT-10B (0-0.5)	Solid	01/10/14 11:48	01/11/14 11:47
600-85389-64	2013-CUFT-10C (0-0.5)	Solid	01/10/14 11:55	01/11/14 11:47

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: MW-44 (0-0.5)

Date Collected: 01/09/14 12:45

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-1

Matrix: Solid

Percent Solids: 76.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.689	b	0.316	0.0324	mg/Kg	☼	01/14/14 12:46	01/15/14 13:30	1
Lead	38.6		0.633	0.133	mg/Kg	☼	01/14/14 12:46	01/15/14 13:30	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	77		1.0	1.0	%	—		01/13/14 13:24	1

## Client Sample ID: 2013-AD-1A (0-0.5)

Date Collected: 01/09/14 13:42

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-5

Matrix: Solid

Percent Solids: 70.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.22	b	0.353	0.0362	mg/Kg	☼	01/14/14 12:46	01/15/14 13:32	1
Lead	452		0.705	0.148	mg/Kg	☼	01/14/14 12:46	01/15/14 13:32	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	30		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	70		1.0	1.0	%	—		01/13/14 13:24	1

## Client Sample ID: 2013-FOP-1A (0-0.5)

Date Collected: 01/09/14 13:58

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-7

Matrix: Solid

Percent Solids: 81.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	85.1		0.609	0.128	mg/Kg	☼	01/14/14 12:46	01/15/14 13:34	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	81		1.0	1.0	%	—		01/13/14 13:24	1

## Client Sample ID: 2013-AD-5 (0-0.5)

Date Collected: 01/09/14 14:12

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-8

Matrix: Solid

Percent Solids: 82.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	7.39	b	0.287	0.0294	mg/Kg	☼	01/14/14 12:46	01/15/14 13:37	1
Lead	2320		0.573	0.120	mg/Kg	☼	01/14/14 12:46	01/15/14 13:37	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	82		1.0	1.0	%	—		01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-WMU14-1A (0.9-2)

Date Collected: 01/09/14 14:40

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-11

Matrix: Solid

Percent Solids: 80.8

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	35500		11.5	2.40	mg/Kg	☼	01/14/14 12:46	01/16/14 08:42	20

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	81		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-WMU14-1A (5-7)

Date Collected: 01/09/14 14:44

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-12

Matrix: Solid

Percent Solids: 72.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	5.14	b	0.324	0.0332	mg/Kg	☼	01/14/14 12:46	01/15/14 13:00	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	17000		13.0	2.72	mg/Kg	☼	01/14/14 12:46	01/16/14 08:44	20

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	73		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: MW-30A (2-4)

Date Collected: 01/09/14 15:08

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-13

Matrix: Solid

Percent Solids: 85.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	52.4		0.571	0.120	mg/Kg	☼	01/14/14 12:46	01/15/14 13:42	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	85		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: DUP 7

Date Collected: 01/09/14 00:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-14

Matrix: Solid

Percent Solids: 67.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.51	b	0.342	0.0350	mg/Kg	☼	01/14/14 12:46	01/15/14 13:59	1

### Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	10500		13.7	2.86	mg/Kg	☼	01/14/14 12:46	01/16/14 08:53	20

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	33		1.0	1.0	%			01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: DUP 7**

**Date Collected: 01/09/14 00:00**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-14**

**Matrix: Solid**

## General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	67		1.0	1.0	%			01/13/14 13:24	1

**Client Sample ID: DUP 8**

**Date Collected: 01/09/14 00:00**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-15**

**Matrix: Solid**

**Percent Solids: 77.5**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	28.9		0.609	0.128	mg/Kg	☼	01/14/14 12:46	01/15/14 14:02	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	77		1.0	1.0	%			01/13/14 13:24	1

**Client Sample ID: ECO-8A (0-0.5)**

**Date Collected: 01/09/14 15:59**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-20**

**Matrix: Solid**

**Percent Solids: 78.3**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	6.70		2.93	0.271	mg/Kg	☼	01/14/14 12:46	01/15/14 14:12	1
Arsenic	13.1		1.17	0.255	mg/Kg	☼	01/14/14 12:46	01/15/14 14:12	1
Cadmium	5.65	b	0.293	0.0300	mg/Kg	☼	01/14/14 12:46	01/15/14 14:12	1
Lead	1090		0.586	0.123	mg/Kg	☼	01/14/14 12:46	01/15/14 14:12	1
Selenium	0.486	J	2.34	0.303	mg/Kg	☼	01/14/14 12:46	01/15/14 14:12	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	78		1.0	1.0	%			01/13/14 13:24	1

**Client Sample ID: 2013-SDA-3B (0-0.5)**

**Date Collected: 01/09/14 16:05**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-21**

**Matrix: Solid**

**Percent Solids: 83.2**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	4.02	b	0.292	0.0299	mg/Kg	☼	01/14/14 12:46	01/15/14 14:14	1
Lead	1000		0.583	0.122	mg/Kg	☼	01/14/14 12:46	01/15/14 14:14	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	17		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	83		1.0	1.0	%			01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: RINSE BLANK-CME

Date Collected: 01/09/14 08:25

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-22

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.000350	U ^	0.00500	0.000350	mg/L	—	01/13/14 16:05	01/15/14 13:00	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L	—	01/13/14 16:05	01/15/14 13:00	1

## Client Sample ID: 2013-AD-03 (0-0.5)

Date Collected: 01/09/14 13:10

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85389-23

Matrix: Solid

Percent Solids: 89.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.92		2.63	0.244	mg/Kg	☼	01/15/14 12:30	01/16/14 10:09	1
Arsenic	11.0		1.05	0.229	mg/Kg	☼	01/15/14 12:30	01/16/14 10:09	1
Cadmium	1.51		0.263	0.0270	mg/Kg	☼	01/15/14 12:30	01/16/14 10:09	1
Lead	734		0.526	0.110	mg/Kg	☼	01/15/14 12:30	01/16/14 10:09	1
Selenium	0.295	J	2.10	0.272	mg/Kg	☼	01/15/14 12:30	01/16/14 10:09	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10		1.0	1.0	%	—		01/15/14 15:56	1
Percent Solids	90		1.0	1.0	%	—		01/15/14 15:56	1

## Client Sample ID: MW-36 (0-2)

Date Collected: 01/10/14 09:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-26

Matrix: Solid

Percent Solids: 72.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	2.74	b	0.333	0.0341	mg/Kg	☼	01/14/14 12:46	01/15/14 14:17	1
Lead	3120		0.665	0.139	mg/Kg	☼	01/14/14 12:46	01/15/14 14:17	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	72		1.0	1.0	%	—		01/13/14 13:24	1

## Client Sample ID: MW-35 (1-3)

Date Collected: 01/10/14 10:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-27

Matrix: Solid

Percent Solids: 73.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	40.0		0.335	0.0343	mg/Kg	☼	01/14/14 14:21	01/15/14 14:31	1
Lead	3300		0.669	0.140	mg/Kg	☼	01/14/14 14:21	01/15/14 14:31	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%	—		01/13/14 13:24	1
Percent Solids	73		1.0	1.0	%	—		01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: SCC-5B (0-0.5)**

Date Collected: 01/10/14 08:51

Date Received: 01/11/14 11:47

**Lab Sample ID: 600-85389-29**

Matrix: Solid

Percent Solids: 79.4

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.11		2.89	0.267	mg/Kg	☼	01/14/14 14:21	01/15/14 14:36	1
Arsenic	11.1		1.16	0.252	mg/Kg	☼	01/14/14 14:21	01/15/14 14:36	1
Cadmium	2.48		0.289	0.0296	mg/Kg	☼	01/14/14 14:21	01/15/14 14:36	1
Lead	1400		0.578	0.121	mg/Kg	☼	01/14/14 14:21	01/15/14 14:36	1
Selenium	0.299	U	2.31	0.299	mg/Kg	☼	01/14/14 14:21	01/15/14 14:36	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	79		1.0	1.0	%			01/13/14 13:24	1

**Client Sample ID: SCC-5A (0-0.5)**

Date Collected: 01/10/14 08:59

Date Received: 01/11/14 11:47

**Lab Sample ID: 600-85389-30**

Matrix: Solid

Percent Solids: 77.0

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.278	U	3.01	0.278	mg/Kg	☼	01/14/14 14:21	01/15/14 14:38	1
Cadmium	0.258	J	0.301	0.0308	mg/Kg	☼	01/14/14 14:21	01/15/14 14:38	1
Lead	29.8		0.601	0.126	mg/Kg	☼	01/14/14 14:21	01/15/14 14:38	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	77		1.0	1.0	%			01/13/14 13:24	1

**Client Sample ID: 2013-CUFT-14 (0-2)**

Date Collected: 01/10/14 09:13

Date Received: 01/11/14 11:47

**Lab Sample ID: 600-85389-31**

Matrix: Solid

Percent Solids: 85.1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.00188	U	0.0196	0.00188	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1221	0.0101	U	0.0196	0.0101	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1232	0.00786	U	0.0196	0.00786	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1242	0.00145	U	0.0196	0.00145	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1248	0.00292	U	0.0196	0.00292	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1254	0.00259	U	0.0196	0.00259	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
PCB-1260	0.0158	U	0.0196	0.0158	mg/Kg	☼	01/13/14 14:23	01/14/14 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	118		58 - 164				01/13/14 14:23	01/14/14 17:19	1
DCB Decachlorobiphenyl	111		70 - 164				01/13/14 14:23	01/14/14 17:19	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.240	J	0.280	0.0287	mg/Kg	☼	01/14/14 14:21	01/15/14 14:48	1
Lead	14.7		0.559	0.117	mg/Kg	☼	01/14/14 14:21	01/15/14 14:48	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-CUFT-14 (0-2)

Date Collected: 01/10/14 09:13

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-31

Matrix: Solid

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	85		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-11 (0-0.5)

Date Collected: 01/10/14 09:18

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-33

Matrix: Solid

Percent Solids: 73.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	51.1		0.634	0.133	mg/Kg	☼	01/14/14 14:21	01/15/14 14:57	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	74		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-CUFT-5A (0-0.5)

Date Collected: 01/10/14 09:43

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-37

Matrix: Solid

Percent Solids: 76.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.492		0.328	0.0336	mg/Kg	☼	01/14/14 14:21	01/15/14 15:02	1
Lead	87.8		0.656	0.138	mg/Kg	☼	01/14/14 14:21	01/15/14 15:02	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	76		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-5D (2-4)

Date Collected: 01/10/14 09:53

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-39

Matrix: Solid

Percent Solids: 74.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.564		0.310	0.0318	mg/Kg	☼	01/14/14 14:21	01/15/14 15:05	1
Lead	20.0		0.620	0.130	mg/Kg	☼	01/14/14 14:21	01/15/14 15:05	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	74		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-6A (0-0.5)

Date Collected: 01/10/14 10:14

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-43

Matrix: Solid

Percent Solids: 82.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	5.50		0.292	0.0299	mg/Kg	☼	01/14/14 14:21	01/15/14 15:07	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-CUFT-6A (0-0.5)

Date Collected: 01/10/14 10:14

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-43

Matrix: Solid

Percent Solids: 82.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	603		0.583	0.122	mg/Kg	☼	01/14/14 14:21	01/15/14 15:07	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	82		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-6C (2-4)

Date Collected: 01/10/14 10:23

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-45

Matrix: Solid

Percent Solids: 74.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.760		0.330	0.0339	mg/Kg	☼	01/14/14 14:21	01/15/14 15:10	1
Lead	20.3		0.661	0.139	mg/Kg	☼	01/14/14 14:21	01/15/14 15:10	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	75		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: DUP 9

Date Collected: 01/10/14 00:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-49

Matrix: Solid

Percent Solids: 72.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.888		0.315	0.0323	mg/Kg	☼	01/14/14 14:21	01/15/14 15:20	1
Lead	21.6		0.630	0.132	mg/Kg	☼	01/14/14 14:21	01/15/14 15:20	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	73		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-6B (0-0.5)

Date Collected: 01/10/14 10:41

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-50

Matrix: Solid

Percent Solids: 73.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.624		0.312	0.0320	mg/Kg	☼	01/14/14 14:21	01/15/14 15:29	1
Lead	26.5		0.624	0.131	mg/Kg	☼	01/14/14 14:21	01/15/14 15:29	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	73		1.0	1.0	%			01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-CUFT-5C (0-0.5)

Date Collected: 01/10/14 10:51

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-51

Matrix: Solid

Percent Solids: 75.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.719		0.324	0.0332	mg/Kg	☼	01/14/14 14:21	01/15/14 15:32	1
Lead	60.0		0.648	0.136	mg/Kg	☼	01/14/14 14:21	01/15/14 15:32	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	75		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-7B (0-0.5)

Date Collected: 01/10/14 11:08

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-52

Matrix: Solid

Percent Solids: 72.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.545		0.332	0.0341	mg/Kg	☼	01/15/14 12:30	01/16/14 10:11	1
Lead	48.0		0.665	0.139	mg/Kg	☼	01/15/14 12:30	01/16/14 10:11	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	72		1.0	1.0	%			01/15/14 15:56	1

## Client Sample ID: 2013-CUFT-7B (2-4)

Date Collected: 01/10/14 11:09

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-53

Matrix: Solid

Percent Solids: 77.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.730		0.317	0.0326	mg/Kg	☼	01/14/14 14:21	01/15/14 15:34	1
Lead	41.8		0.635	0.133	mg/Kg	☼	01/14/14 14:21	01/15/14 15:34	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	77		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-10D (2-4)

Date Collected: 01/10/14 11:26

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-58

Matrix: Solid

Percent Solids: 73.1

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.606		0.326	0.0334	mg/Kg	☼	01/14/14 14:21	01/15/14 15:36	1
Lead	16.6		0.652	0.137	mg/Kg	☼	01/14/14 14:21	01/15/14 15:36	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	73		1.0	1.0	%			01/13/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-CUFT-10A (0-0.5)

Date Collected: 01/10/14 11:41

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-62

Matrix: Solid

Percent Solids: 76.2

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.618		0.319	0.0327	mg/Kg	☼	01/14/14 14:21	01/15/14 15:39	1
Lead	76.1		0.637	0.134	mg/Kg	☼	01/14/14 14:21	01/15/14 15:39	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	76		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-10B (0-0.5)

Date Collected: 01/10/14 11:48

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-63

Matrix: Solid

Percent Solids: 74.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.19	J	3.09	0.286	mg/Kg	☼	01/14/14 14:21	01/15/14 15:41	1
Arsenic	11.1		1.24	0.269	mg/Kg	☼	01/14/14 14:21	01/15/14 15:41	1
Cadmium	2.19		0.309	0.0317	mg/Kg	☼	01/14/14 14:21	01/15/14 15:41	1
Lead	1290		0.618	0.130	mg/Kg	☼	01/14/14 14:21	01/15/14 15:41	1
Selenium	0.414	J	2.47	0.320	mg/Kg	☼	01/14/14 14:21	01/15/14 15:41	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	75		1.0	1.0	%			01/13/14 13:24	1

## Client Sample ID: 2013-CUFT-10C (0-0.5)

Date Collected: 01/10/14 11:55

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-64

Matrix: Solid

Percent Solids: 74.8

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.878		0.318	0.0326	mg/Kg	☼	01/14/14 14:21	01/15/14 15:44	1
Lead	92.7		0.637	0.133	mg/Kg	☼	01/14/14 14:21	01/15/14 15:44	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/13/14 13:24	1
Percent Solids	75		1.0	1.0	%			01/13/14 13:24	1

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

### Qualifiers

#### GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

#### Metals

Qualifier	Qualifier Description
b	The compound was found in the blank and sample
F	Duplicate RPD exceeds the control limit
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
N	MS, MSD: Spike recovery is outside acceptance 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.
U	Analyte was not detected at or above the SDL.
N	RPD of the MS and MSD exceeds the control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.

### 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
CFL	Contains Free Liquid
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)

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX2 (58-164)	DCB2 (70-164)
600-85389-31	2013-CUFT-14 (0-2)	118	111
LCS 600-124838/2-A	Lab Control Sample	83	106
MB 600-124838/1-A	Method Blank	91	110

### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 600-124838/1-A

Matrix: Solid

Analysis Batch: 125027

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124838

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.00160	U	0.0167	0.00160	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1221	0.00863	U	0.0167	0.00863	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1232	0.00670	U	0.0167	0.00670	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1242	0.00124	U	0.0167	0.00124	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1248	0.00249	U	0.0167	0.00249	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1254	0.00221	U	0.0167	0.00221	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1260	0.0135	U	0.0167	0.0135	mg/Kg		01/13/14 14:23	01/14/14 15:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		58 - 164	01/13/14 14:23	01/14/14 15:08	1
DCB Decachlorobiphenyl	110		70 - 164	01/13/14 14:23	01/14/14 15:08	1

Lab Sample ID: LCS 600-124838/2-A

Matrix: Solid

Analysis Batch: 125027

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	0.167	0.1323		mg/Kg		79	68 - 122
PCB-1260	0.167	0.1460		mg/Kg		88	10 - 158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	83		58 - 164
DCB Decachlorobiphenyl	106		70 - 164

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-124862/1-A

Matrix: Water

Analysis Batch: 125051

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124862

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		01/13/14 16:05	01/15/14 12:56	1
Arsenic	0.00328	U ^	0.0100	0.00328	mg/L		01/13/14 16:05	01/15/14 12:56	1
Cadmium	0.000350	U ^	0.00500	0.000350	mg/L		01/13/14 16:05	01/15/14 12:56	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/13/14 16:05	01/15/14 12:56	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		01/13/14 16:05	01/15/14 12:56	1

Lab Sample ID: LCS 600-124862/2-A

Matrix: Water

Analysis Batch: 125051

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	1.005		mg/L		101	80 - 120
Arsenic	1.00	0.9633	^	mg/L		96	80 - 120
Cadmium	0.500	0.4866	^	mg/L		97	80 - 120
Lead	1.00	1.008	^	mg/L		101	80 - 120
Selenium	1.00	0.9649		mg/L		96	80 - 120

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

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

Lab Sample ID: MB 600-124919/1-A

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124919

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Cadmium	0.03000	J	0.250	0.0256	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/14/14 12:46	01/15/14 12:51	1

Lab Sample ID: LCSSRM 600-124919/2-A

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Antimony	88.2	101.7		mg/Kg		115.3	45.4 - 231.3
Arsenic	99.6	99.60		mg/Kg		100.0	80.8 - 119.5
Cadmium	182	190.9		mg/Kg		104.9	81.9 - 118.1
Lead	115	115.8		mg/Kg		100.7	81.8 - 119.1
Selenium	150	147.1		mg/Kg		98.1	77.3 - 122.7

Lab Sample ID: 600-85389-12 MS

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: 2013-WMU14-1A (5-7)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	73.3		66.0	29.00	N	mg/Kg	☼	-67	75 - 125
Arsenic	52.6		66.0	77.29	N	mg/Kg	☼	37	75 - 125
Cadmium	5.14	b	33.0	34.10		mg/Kg	☼	88	75 - 125
Lead	15500	E	66.0	132.8	4	mg/Kg	☼	-2324	75 - 125
Selenium	0.434	J	66.0	58.10		mg/Kg	☼	87	75 - 125

Lab Sample ID: 600-85389-12 MSD

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: 2013-WMU14-1A (5-7)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	73.3		66.6	32.10	N	mg/Kg	☼	-62	75 - 125	10	20
Arsenic	52.6		66.6	78.57	N	mg/Kg	☼	39	75 - 125	2	20
Cadmium	5.14	b	33.3	33.95		mg/Kg	☼	86	75 - 125	0	20
Lead	15500	E	66.6	121.2	4	mg/Kg	☼	-2304	75 - 125	9	20
Selenium	0.434	J	66.6	58.33		mg/Kg	☼	87	75 - 125	0	20

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

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

Lab Sample ID: 600-85389-13 MS

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: MW-30A (2-4)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	1.55	J	58.2	24.49	N	mg/Kg	☼	39	75 - 125
Arsenic	8.87		58.2	61.35		mg/Kg	☼	90	75 - 125
Cadmium	1.15	b	29.1	29.13		mg/Kg	☼	96	75 - 125
Lead	52.4		58.2	89.21	N	mg/Kg	☼	63	75 - 125
Selenium	0.295	U	58.2	49.34		mg/Kg	☼	85	75 - 125

Lab Sample ID: 600-85389-13 MSD

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: MW-30A (2-4)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	1.55	J	55.4	21.12	N	mg/Kg	☼	35	75 - 125	15	20
Arsenic	8.87		55.4	60.23		mg/Kg	☼	93	75 - 125	2	20
Cadmium	1.15	b	27.7	27.95		mg/Kg	☼	97	75 - 125	4	20
Lead	52.4		55.4	69.10	N	mg/Kg	☼	30	75 - 125	25	20
Selenium	0.295	U	55.4	46.99		mg/Kg	☼	85	75 - 125	5	20

Lab Sample ID: 600-85389-12 DU

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: 2013-WMU14-1A (5-7)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	73.3		60.00		mg/Kg	☼	20	20
Arsenic	52.6		42.82	F	mg/Kg	☼	21	20
Cadmium	5.14	b	8.174	F	mg/Kg	☼	46	20
Selenium	0.434	J	0.3904	J	mg/Kg	☼	11	20

Lab Sample ID: 600-85389-13 DU

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: MW-30A (2-4)

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	1.55	J	0.254	U	mg/Kg	☼	NC	20
Arsenic	8.87		8.996		mg/Kg	☼	1	20
Cadmium	1.15	b	0.4284	F	mg/Kg	☼	92	20
Lead	52.4		17.32	F	mg/Kg	☼	101	20
Selenium	0.295	U	0.284	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-124939/1-A

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124939

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/14/14 14:21	01/15/14 14:26	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/14/14 14:21	01/15/14 14:26	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/14/14 14:21	01/15/14 14:26	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/14/14 14:21	01/15/14 14:26	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/14/14 14:21	01/15/14 14:26	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

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

Lab Sample ID: LCSSRM 600-124939/2-A  
Matrix: Solid  
Analysis Batch: 125010

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 124939

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.2	76.41		mg/Kg		86.6	45.4 - 231.3
Arsenic	99.6	93.75		mg/Kg		94.1	80.8 - 119.5
Cadmium	182	178.7		mg/Kg		98.2	81.9 - 118.1
Lead	115	102.8		mg/Kg		89.4	81.8 - 119.1
Selenium	150	142.5		mg/Kg		95.0	77.3 - 122.7

Lab Sample ID: 600-85389-30 MS  
Matrix: Solid  
Analysis Batch: 125010

Client Sample ID: SCC-5A (0-0.5)  
Prep Type: Total/NA  
Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.278	U	59.6	23.01	N1	mg/Kg	☼	39	75 - 125
Arsenic	10.2		59.6	59.62		mg/Kg	☼	83	75 - 125
Cadmium	0.258	J	29.8	29.29		mg/Kg	☼	97	75 - 125
Lead	29.8		59.6	81.42		mg/Kg	☼	87	75 - 125
Selenium	0.311	U	59.6	49.96		mg/Kg	☼	84	75 - 125

Lab Sample ID: 600-85389-30 MSD  
Matrix: Solid  
Analysis Batch: 125010

Client Sample ID: SCC-5A (0-0.5)  
Prep Type: Total/NA  
Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.278	U	64.3	25.86	N1	mg/Kg	☼	40	75 - 125	12	20
Arsenic	10.2		64.3	65.88		mg/Kg	☼	87	75 - 125	10	20
Cadmium	0.258	J	32.1	32.20		mg/Kg	☼	99	75 - 125	9	20
Lead	29.8		64.3	84.01		mg/Kg	☼	84	75 - 125	3	20
Selenium	0.311	U	64.3	55.00		mg/Kg	☼	86	75 - 125	10	20

Lab Sample ID: 600-85389-45 MS  
Matrix: Solid  
Analysis Batch: 125010

Client Sample ID: 2013-CUFT-6C (2-4)  
Prep Type: Total/NA  
Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.306	U	64.3	24.62	N	mg/Kg	☼	38	75 - 125
Arsenic	10.3		64.3	61.10		mg/Kg	☼	79	75 - 125
Cadmium	0.760		32.2	29.48		mg/Kg	☼	89	75 - 125
Lead	20.3		64.3	75.04		mg/Kg	☼	85	75 - 125
Selenium	0.342	U	64.3	50.40		mg/Kg	☼	78	75 - 125

Lab Sample ID: 600-85389-45 MSD  
Matrix: Solid  
Analysis Batch: 125010

Client Sample ID: 2013-CUFT-6C (2-4)  
Prep Type: Total/NA  
Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.306	U	66.8	25.47	N	mg/Kg	☼	38	75 - 125	3	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

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

Lab Sample ID: 600-85389-45 MSD

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: 2013-CUFT-6C (2-4)

Prep Type: Total/NA

Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	10.3		66.8	71.84		mg/Kg	☼	92	75 - 125	16	20
Cadmium	0.760		33.4	35.46		mg/Kg	☼	104	75 - 125	18	20
Lead	20.3		66.8	81.59		mg/Kg	☼	92	75 - 125	8	20
Selenium	0.342	U	66.8	60.50		mg/Kg	☼	91	75 - 125	18	20

Lab Sample ID: 600-85389-30 DU

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: SCC-5A (0-0.5)

Prep Type: Total/NA

Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.278	U	0.289	U	mg/Kg	☼	NC	20
Arsenic	10.2		9.757		mg/Kg	☼	5	20
Cadmium	0.258	J	0.2622	J	mg/Kg	☼	1	20
Lead	29.8		24.66		mg/Kg	☼	19	20
Selenium	0.311	U	0.323	U	mg/Kg	☼	NC	20

Lab Sample ID: 600-85389-45 DU

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: 2013-CUFT-6C (2-4)

Prep Type: Total/NA

Prep Batch: 124939

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	0.306	U	0.284	U	mg/Kg	☼	NC	20
Arsenic	10.3		12.35		mg/Kg	☼	18	20
Cadmium	0.760		1.892	F	mg/Kg	☼	85	20
Lead	20.3		30.35	F	mg/Kg	☼	40	20
Selenium	0.342	U	0.317	U	mg/Kg	☼	NC	20

Lab Sample ID: MB 600-125018/1-A

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125018

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/15/14 12:30	01/16/14 09:51	1

Lab Sample ID: LCSSRM 600-125018/2-A

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125018

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.2	59.66		mg/Kg		67.6	45.4 - 231.3
Arsenic	99.6	98.49		mg/Kg		98.9	80.8 - 119.5
Cadmium	182	178.7		mg/Kg		98.2	81.9 - 118.1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

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

Lab Sample ID: LCSSRM 600-125018/2-A  
Matrix: Solid  
Analysis Batch: 125110

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 125018

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	115	110.8		mg/Kg		96.3	81.8 - 119.1
Selenium	150	144.7		mg/Kg		96.5	77.3 - 122.7

## Method: 6010B - Metals (ICP) - DL

Lab Sample ID: 600-85389-12 DU  
Matrix: Solid  
Analysis Batch: 125083

Client Sample ID: 2013-WMU14-1A (5-7)  
Prep Type: Total/NA  
Prep Batch: 124919

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Lead - DL	17000		14430		mg/Kg	✖	16	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-85389-7 DU  
Matrix: Solid  
Analysis Batch: 124801

Client Sample ID: 2013-FOP-1A (0-0.5)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	19		19		%		3	20
Percent Solids	81		81		%		0.8	20

Lab Sample ID: 600-85389-20 DU  
Matrix: Solid  
Analysis Batch: 124801

Client Sample ID: ECO-8A (0-0.5)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	22		22		%		0.7	20
Percent Solids	78		78		%		0.2	20

Lab Sample ID: 600-85389-39 DU  
Matrix: Solid  
Analysis Batch: 124801

Client Sample ID: 2013-CUFT-5D (2-4)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	26		27		%		3	20
Percent Solids	74		73		%		1	20

Lab Sample ID: 600-85389-64 DU  
Matrix: Solid  
Analysis Batch: 124801

Client Sample ID: 2013-CUFT-10C (0-0.5)  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	25		31		%		20	20
Percent Solids	75		69		%		8	20

TestAmerica Houston

## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	MQL	MDL	Units	Method
PCB-1016	0.0167	0.00160	mg/Kg	8082
PCB-1221	0.0167	0.00863	mg/Kg	8082
PCB-1232	0.0167	0.00670	mg/Kg	8082
PCB-1242	0.0167	0.00124	mg/Kg	8082
PCB-1248	0.0167	0.00249	mg/Kg	8082
PCB-1254	0.0167	0.00221	mg/Kg	8082
PCB-1260	0.0167	0.0135	mg/Kg	8082

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

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Cadmium	0.00500	0.000350	mg/L	6010B
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B
Selenium	2.00	0.259	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## GC Semi VOA

### Prep Batch: 124838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-31	2013-CUFT-14 (0-2)	Total/NA	Solid	3546	
LCS 600-124838/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 600-124838/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 125027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-31	2013-CUFT-14 (0-2)	Total/NA	Solid	8082	124838
LCS 600-124838/2-A	Lab Control Sample	Total/NA	Solid	8082	124838
MB 600-124838/1-A	Method Blank	Total/NA	Solid	8082	124838

## Metals

### Prep Batch: 124862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-22	RINSE BLANK-CME	Total/NA	Water	3010A	
LCS 600-124862/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-124862/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 124919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-1	MW-44 (0-0.5)	Total/NA	Solid	3050B	
600-85389-5	2013-AD-1A (0-0.5)	Total/NA	Solid	3050B	
600-85389-7	2013-FOP-1A (0-0.5)	Total/NA	Solid	3050B	
600-85389-8	2013-AD-5 (0-0.5)	Total/NA	Solid	3050B	
600-85389-11 - DL	2013-WMU14-1A (0.9-2)	Total/NA	Solid	3050B	
600-85389-12 - DL	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-12	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-12 DU	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-12 DU - DL	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-12 MS	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-12 MSD	2013-WMU14-1A (5-7)	Total/NA	Solid	3050B	
600-85389-13	MW-30A (2-4)	Total/NA	Solid	3050B	
600-85389-13 DU	MW-30A (2-4)	Total/NA	Solid	3050B	
600-85389-13 MS	MW-30A (2-4)	Total/NA	Solid	3050B	
600-85389-13 MSD	MW-30A (2-4)	Total/NA	Solid	3050B	
600-85389-14 - DL	DUP 7	Total/NA	Solid	3050B	
600-85389-14	DUP 7	Total/NA	Solid	3050B	
600-85389-15	DUP 8	Total/NA	Solid	3050B	
600-85389-20	ECO-8A (0-0.5)	Total/NA	Solid	3050B	
600-85389-21	2013-SDA-3B (0-0.5)	Total/NA	Solid	3050B	
600-85389-26	MW-36 (0-2)	Total/NA	Solid	3050B	
LCSSRM 600-124919/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-124919/1-A	Method Blank	Total/NA	Solid	3050B	

### Prep Batch: 124939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-27	MW-35 (1-3)	Total/NA	Solid	3050B	
600-85389-29	SCC-5B (0-0.5)	Total/NA	Solid	3050B	
600-85389-30	SCC-5A (0-0.5)	Total/NA	Solid	3050B	
600-85389-30 DU	SCC-5A (0-0.5)	Total/NA	Solid	3050B	

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Metals (Continued)

### Prep Batch: 124939 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-30 MS	SCC-5A (0-0.5)	Total/NA	Solid	3050B	
600-85389-30 MSD	SCC-5A (0-0.5)	Total/NA	Solid	3050B	
600-85389-31	2013-CUFT-14 (0-2)	Total/NA	Solid	3050B	
600-85389-33	2013-CUFT-11 (0-0.5)	Total/NA	Solid	3050B	
600-85389-37	2013-CUFT-5A (0-0.5)	Total/NA	Solid	3050B	
600-85389-39	2013-CUFT-5D (2-4)	Total/NA	Solid	3050B	
600-85389-43	2013-CUFT-6A (0-0.5)	Total/NA	Solid	3050B	
600-85389-45	2013-CUFT-6C (2-4)	Total/NA	Solid	3050B	
600-85389-45 DU	2013-CUFT-6C (2-4)	Total/NA	Solid	3050B	
600-85389-45 MS	2013-CUFT-6C (2-4)	Total/NA	Solid	3050B	
600-85389-45 MSD	2013-CUFT-6C (2-4)	Total/NA	Solid	3050B	
600-85389-49	DUP 9	Total/NA	Solid	3050B	
600-85389-50	2013-CUFT-6B (0-0.5)	Total/NA	Solid	3050B	
600-85389-51	2013-CUFT-5C (0-0.5)	Total/NA	Solid	3050B	
600-85389-53	2013-CUFT-7B (2-4)	Total/NA	Solid	3050B	
600-85389-58	2013-CUFT-10D (2-4)	Total/NA	Solid	3050B	
600-85389-62	2013-CUFT-10A (0-0.5)	Total/NA	Solid	3050B	
600-85389-63	2013-CUFT-10B (0-0.5)	Total/NA	Solid	3050B	
600-85389-64	2013-CUFT-10C (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-124939/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-124939/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-1	MW-44 (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-5	2013-AD-1A (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-7	2013-FOP-1A (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-8	2013-AD-5 (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-12	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-12 DU	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-12 MS	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-12 MSD	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-13	MW-30A (2-4)	Total/NA	Solid	6010B	124919
600-85389-13 DU	MW-30A (2-4)	Total/NA	Solid	6010B	124919
600-85389-13 MS	MW-30A (2-4)	Total/NA	Solid	6010B	124919
600-85389-13 MSD	MW-30A (2-4)	Total/NA	Solid	6010B	124919
600-85389-14	DUP 7	Total/NA	Solid	6010B	124919
600-85389-15	DUP 8	Total/NA	Solid	6010B	124919
600-85389-20	ECO-8A (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-21	2013-SDA-3B (0-0.5)	Total/NA	Solid	6010B	124919
600-85389-26	MW-36 (0-2)	Total/NA	Solid	6010B	124919
600-85389-27	MW-35 (1-3)	Total/NA	Solid	6010B	124939
600-85389-29	SCC-5B (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-30	SCC-5A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-30 DU	SCC-5A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-30 MS	SCC-5A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-30 MSD	SCC-5A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-31	2013-CUFT-14 (0-2)	Total/NA	Solid	6010B	124939
600-85389-33	2013-CUFT-11 (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-37	2013-CUFT-5A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-39	2013-CUFT-5D (2-4)	Total/NA	Solid	6010B	124939

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Metals (Continued)

### Analysis Batch: 125010 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-43	2013-CUFT-6A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-45	2013-CUFT-6C (2-4)	Total/NA	Solid	6010B	124939
600-85389-45 DU	2013-CUFT-6C (2-4)	Total/NA	Solid	6010B	124939
600-85389-45 MS	2013-CUFT-6C (2-4)	Total/NA	Solid	6010B	124939
600-85389-45 MSD	2013-CUFT-6C (2-4)	Total/NA	Solid	6010B	124939
600-85389-49	DUP 9	Total/NA	Solid	6010B	124939
600-85389-50	2013-CUFT-6B (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-51	2013-CUFT-5C (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-53	2013-CUFT-7B (2-4)	Total/NA	Solid	6010B	124939
600-85389-58	2013-CUFT-10D (2-4)	Total/NA	Solid	6010B	124939
600-85389-62	2013-CUFT-10A (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-63	2013-CUFT-10B (0-0.5)	Total/NA	Solid	6010B	124939
600-85389-64	2013-CUFT-10C (0-0.5)	Total/NA	Solid	6010B	124939
LCSSRM 600-124919/2-A	Lab Control Sample	Total/NA	Solid	6010B	124919
LCSSRM 600-124939/2-A	Lab Control Sample	Total/NA	Solid	6010B	124939
MB 600-124919/1-A	Method Blank	Total/NA	Solid	6010B	124919
MB 600-124939/1-A	Method Blank	Total/NA	Solid	6010B	124939

### Prep Batch: 125018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-23	2013-AD-03 (0-0.5)	Total/NA	Solid	3050B	
600-85389-52	2013-CUFT-7B (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-125018/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-125018/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-22	RINSE BLANK-CME	Total/NA	Water	6010B	124862
LCS 600-124862/2-A	Lab Control Sample	Total/NA	Water	6010B	124862
MB 600-124862/1-A	Method Blank	Total/NA	Water	6010B	124862

### Analysis Batch: 125083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-11 - DL	2013-WMU14-1A (0.9-2)	Total/NA	Solid	6010B	124919
600-85389-12 - DL	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-12 DU - DL	2013-WMU14-1A (5-7)	Total/NA	Solid	6010B	124919
600-85389-14 - DL	DUP 7	Total/NA	Solid	6010B	124919

### Analysis Batch: 125110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-23	2013-AD-03 (0-0.5)	Total/NA	Solid	6010B	125018
600-85389-52	2013-CUFT-7B (0-0.5)	Total/NA	Solid	6010B	125018
LCSSRM 600-125018/2-A	Lab Control Sample	Total/NA	Solid	6010B	125018
MB 600-125018/1-A	Method Blank	Total/NA	Solid	6010B	125018

## General Chemistry

### Analysis Batch: 124801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-1	MW-44 (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## General Chemistry (Continued)

### Analysis Batch: 124801 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-5	2013-AD-1A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-7	2013-FOP-1A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-7 DU	2013-FOP-1A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-8	2013-AD-5 (0-0.5)	Total/NA	Solid	Moisture	
600-85389-11	2013-WMU14-1A (0.9-2)	Total/NA	Solid	Moisture	
600-85389-12	2013-WMU14-1A (5-7)	Total/NA	Solid	Moisture	
600-85389-12 MS	2013-WMU14-1A (5-7)	Total/NA	Solid	Moisture	
600-85389-12 MSD	2013-WMU14-1A (5-7)	Total/NA	Solid	Moisture	
600-85389-13	MW-30A (2-4)	Total/NA	Solid	Moisture	
600-85389-13 MS	MW-30A (2-4)	Total/NA	Solid	Moisture	
600-85389-13 MSD	MW-30A (2-4)	Total/NA	Solid	Moisture	
600-85389-14	DUP 7	Total/NA	Solid	Moisture	
600-85389-15	DUP 8	Total/NA	Solid	Moisture	
600-85389-20	ECO-8A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-20 DU	ECO-8A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-21	2013-SDA-3B (0-0.5)	Total/NA	Solid	Moisture	
600-85389-26	MW-36 (0-2)	Total/NA	Solid	Moisture	
600-85389-27	MW-35 (1-3)	Total/NA	Solid	Moisture	
600-85389-29	SCC-5B (0-0.5)	Total/NA	Solid	Moisture	
600-85389-30	SCC-5A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-31	2013-CUFT-14 (0-2)	Total/NA	Solid	Moisture	
600-85389-37	2013-CUFT-5A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-39	2013-CUFT-5D (2-4)	Total/NA	Solid	Moisture	
600-85389-39 DU	2013-CUFT-5D (2-4)	Total/NA	Solid	Moisture	
600-85389-43	2013-CUFT-6A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-45	2013-CUFT-6C (2-4)	Total/NA	Solid	Moisture	
600-85389-45 MS	2013-CUFT-6C (2-4)	Total/NA	Solid	Moisture	
600-85389-45 MSD	2013-CUFT-6C (2-4)	Total/NA	Solid	Moisture	
600-85389-49	DUP 9	Total/NA	Solid	Moisture	
600-85389-50	2013-CUFT-6B (0-0.5)	Total/NA	Solid	Moisture	
600-85389-51	2013-CUFT-5C (0-0.5)	Total/NA	Solid	Moisture	
600-85389-53	2013-CUFT-7B (2-4)	Total/NA	Solid	Moisture	
600-85389-58	2013-CUFT-10D (2-4)	Total/NA	Solid	Moisture	
600-85389-62	2013-CUFT-10A (0-0.5)	Total/NA	Solid	Moisture	
600-85389-63	2013-CUFT-10B (0-0.5)	Total/NA	Solid	Moisture	
600-85389-64	2013-CUFT-10C (0-0.5)	Total/NA	Solid	Moisture	
600-85389-64 DU	2013-CUFT-10C (0-0.5)	Total/NA	Solid	Moisture	

### Analysis Batch: 125061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85389-23	2013-AD-03 (0-0.5)	Total/NA	Solid	Moisture	
600-85389-33	2013-CUFT-11 (0-0.5)	Total/NA	Solid	Moisture	
600-85389-52	2013-CUFT-7B (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: MW-44 (0-0.5)**

**Date Collected: 01/09/14 12:45**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-1**

**Matrix: Solid**

**Percent Solids: 76.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125010	01/15/14 13:30	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-AD-1A (0-0.5)**

**Date Collected: 01/09/14 13:42**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-5**

**Matrix: Solid**

**Percent Solids: 70.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	125010	01/15/14 13:32	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-FOP-1A (0-0.5)**

**Date Collected: 01/09/14 13:58**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-7**

**Matrix: Solid**

**Percent Solids: 81.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	125010	01/15/14 13:34	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-AD-5 (0-0.5)**

**Date Collected: 01/09/14 14:12**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-8**

**Matrix: Solid**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125010	01/15/14 13:37	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-WMU14-1A (0.9-2)**

**Date Collected: 01/09/14 14:40**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-11**

**Matrix: Solid**

**Percent Solids: 80.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B	DL		1.08 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.08 g	50 mL	125083	01/16/14 08:42	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-WMU14-1A (5-7)

Date Collected: 01/09/14 14:44

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-12

Matrix: Solid

Percent Solids: 72.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125010	01/15/14 13:00	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.06 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.06 g	50 mL	125083	01/16/14 08:44	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: MW-30A (2-4)

Date Collected: 01/09/14 15:08

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-13

Matrix: Solid

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125010	01/15/14 13:42	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: DUP 7

Date Collected: 01/09/14 00:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-14

Matrix: Solid

Percent Solids: 67.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 13:59	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.09 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B	DL	20	1.09 g	50 mL	125083	01/16/14 08:53	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: DUP 8

Date Collected: 01/09/14 00:00

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-15

Matrix: Solid

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125010	01/15/14 14:02	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: ECO-8A (0-0.5)

Date Collected: 01/09/14 15:59

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-20

Matrix: Solid

Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 14:12	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: ECO-8A (0-0.5)**

**Lab Sample ID: 600-85389-20**

**Date Collected: 01/09/14 15:59**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-SDA-3B (0-0.5)**

**Lab Sample ID: 600-85389-21**

**Date Collected: 01/09/14 16:05**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125010	01/15/14 14:14	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: RINSE BLANK-CME**

**Lab Sample ID: 600-85389-22**

**Date Collected: 01/09/14 08:25**

**Matrix: Water**

**Date Received: 01/11/14 11:47**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	124862	01/13/14 16:05	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	125051	01/15/14 13:00	DCL	TAL HOU

**Client Sample ID: 2013-AD-03 (0-0.5)**

**Lab Sample ID: 600-85389-23**

**Date Collected: 01/09/14 13:10**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 89.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	125018	01/15/14 12:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	125110	01/16/14 10:09	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: MW-36 (0-2)**

**Lab Sample ID: 600-85389-26**

**Date Collected: 01/10/14 09:00**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 72.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	125010	01/15/14 14:17	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: MW-35 (1-3)**

**Date Collected: 01/10/14 10:00**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-27**

**Matrix: Solid**

**Percent Solids: 73.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	125010	01/15/14 14:31	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: SCC-5B (0-0.5)**

**Date Collected: 01/10/14 08:51**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-29**

**Matrix: Solid**

**Percent Solids: 79.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 14:36	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: SCC-5A (0-0.5)**

**Date Collected: 01/10/14 08:59**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-30**

**Matrix: Solid**

**Percent Solids: 77.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125010	01/15/14 14:38	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-14 (0-2)**

**Date Collected: 01/10/14 09:13**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-31**

**Matrix: Solid**

**Percent Solids: 85.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.02 g	5.00 mL	124838	01/13/14 14:23	RLK	TAL HOU
Total/NA	Analysis	8082		1	15.02 g	5.00 mL	125027	01/14/14 17:19	JAL	TAL HOU
Total/NA	Prep	3050B			1.05 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125010	01/15/14 14:48	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-11 (0-0.5)**

**Date Collected: 01/10/14 09:18**

**Date Received: 01/11/14 11:47**

**Lab Sample ID: 600-85389-33**

**Matrix: Solid**

**Percent Solids: 73.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	125010	01/15/14 14:57	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: 2013-CUFT-5A (0-0.5)**

**Lab Sample ID: 600-85389-37**

**Date Collected: 01/10/14 09:43**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 76.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	125010	01/15/14 15:02	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-5D (2-4)**

**Lab Sample ID: 600-85389-39**

**Date Collected: 01/10/14 09:53**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 74.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 15:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-6A (0-0.5)**

**Lab Sample ID: 600-85389-43**

**Date Collected: 01/10/14 10:14**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 82.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	125010	01/15/14 15:07	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-6C (2-4)**

**Lab Sample ID: 600-85389-45**

**Date Collected: 01/10/14 10:23**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 74.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	125010	01/15/14 15:10	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: DUP 9**

**Lab Sample ID: 600-85389-49**

**Date Collected: 01/10/14 00:00**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 72.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 15:20	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

**Client Sample ID: 2013-CUFT-6B (0-0.5)**

**Lab Sample ID: 600-85389-50**

**Date Collected: 01/10/14 10:41**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 73.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	125010	01/15/14 15:29	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-5C (0-0.5)**

**Lab Sample ID: 600-85389-51**

**Date Collected: 01/10/14 10:51**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 75.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125010	01/15/14 15:32	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-7B (0-0.5)**

**Lab Sample ID: 600-85389-52**

**Date Collected: 01/10/14 11:08**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 72.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.04 g	50 mL	125018	01/15/14 12:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.04 g	50 mL	125110	01/16/14 10:11	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-7B (2-4)**

**Lab Sample ID: 600-85389-53**

**Date Collected: 01/10/14 11:09**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 77.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	125010	01/15/14 15:34	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

**Client Sample ID: 2013-CUFT-10D (2-4)**

**Lab Sample ID: 600-85389-58**

**Date Collected: 01/10/14 11:26**

**Matrix: Solid**

**Date Received: 01/11/14 11:47**

**Percent Solids: 73.1**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125010	01/15/14 15:36	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Client Sample ID: 2013-CUFT-10A (0-0.5)

Date Collected: 01/10/14 11:41

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-62

Matrix: Solid

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125010	01/15/14 15:39	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: 2013-CUFT-10B (0-0.5)

Date Collected: 01/10/14 11:48

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-63

Matrix: Solid

Percent Solids: 74.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125010	01/15/14 15:41	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

## Client Sample ID: 2013-CUFT-10C (0-0.5)

Date Collected: 01/10/14 11:55

Date Received: 01/11/14 11:47

## Lab Sample ID: 600-85389-64

Matrix: Solid

Percent Solids: 74.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	124939	01/14/14 14:21	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	125010	01/15/14 15:44	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 13:24	AYS	TAL HOU

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444



# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85389-1

## Laboratory: TestAmerica Houston

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Texas	NELAP	6	T104704223	10-31-15

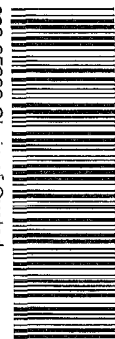
The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record



600-85389 Chain of Custody

<b>Client Information</b>		Sampler: <b>CHRIS TREUNO</b>		Lab PM: <b>Joiner, Dean A</b>		Carrier Tracking No:	
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>817-808-8144</b>		E-Mail: <b>dean.joiner@testamericainc.com</b>			
Company: <b>Golder Associates Inc.</b>		Due Date Requested:		Analysis Requested			
Address: <b>500 Century Plaza Drive Suite 190</b>		City: <b>Houston</b>		TAT Requested (days): <b>5 WD TRRP</b>			
State, Zip: <b>TX, 77073</b>		PO #:					
Phone: <b>281-821-6868(Tel) 281-821-6870(Fax)</b>		Purchase Order Requested					
Email: <b>Christina.Higginbotham@golder.com</b>		WO #:					
Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		Project #:					
Exide Recycling Center, Frisco TX Project		SSOW#:					
Site: <b>EN05-FLS10</b>		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
		Preservation Code:		Matrix (Weigher, Sieved, Overweight, EPC=Issue, A=Add)		Field Filtered Sample (Yes or No)	
Sample Identification		Sample Date		Sample Time		Perform MS/MSD (Yes or No)	
MW-44 (0-0-5)		01/09/14		12:45		G Solid	
MW-44 (0.5-2)		01/09/14		12:48		G Solid	
MW-44 (2-4)		01/09/14		12:50		G Solid	
2013-AD-1A (0.5-2)		01/09/14		13:43		G Solid	
2013-AD-1A (0-0-5)		01/09/14		13:44		G Solid	
2013-AD-1A (2-4)		01/09/14		13:58		G Solid	
2013-AD-5 (0-0-5)		01/09/14		14:12		G Solid	
2013-AD-5 (0.5-2)		01/09/14		14:13		G Solid	
2013-AD-5 (2-4)		01/09/14		14:14		G Solid	
2013-WMW14-1A (0.9-2)		01/09/14		14:40		G Solid	
Possible Hazard Identification		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological <input type="checkbox"/>		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Deliverable Requested: I, II, III, IV, Other (specify)		Date:		Time:		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <b>JOSEPH JANSEN</b>		Date/Time: <b>01/10/14 1530</b>		Company: <b>cooper</b>		Received by: <b>M. McCane</b>	
Relinquished by:		Date/Time:		Company:		Received by: <b>M. McCane</b>	
Relinquished by:		Date/Time:		Company:		Received by: <b>M. McCane</b>	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Date/Time: <b>11/11/14 1147</b>	
						Company: <b>JA</b>	

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b>		Sampler: CH2AS TREMIND		Lab P/N: Joiner, Dean A		Carrier Tracking No(s):		COC No: 600-25571-9015.1	
Client Contact: Christina Higginbotham		Phone: 817-808-8144		E-Mail: dean.joiner@testamericainc.com				Page: 2	
Company: Golder Associates Inc.		Due Date Requested:		Analysis Requested				Job #: 1502086	
Address: 500 Century Plaza Drive, Suite 190		TAT Requested (days): 5 WD TRRP						Preservation Codes:	
City: Houston								A - HCL M - Hexane	
State, Zip: TX, 77073								B - NaOH N - None	
Phone: 281-821-6888(Tel) 281-821-6870(Fax)		PO #:						C - Zn Acetate O - AsNaO2	
Email: Christina.Higginbotham@golder.com		Purchase Order Requested						D - Nitric Acid P - Na2OAS	
Project Name: Exide Recycling Center, Frisco TX Project		Project #:						E - NaHSO4 Q - Na2SO3	
Site: EXIDE-FRISCO		SSOV#:						F - MeOH R - Na2S2O3	
								G - Anchor S - H2SO4	
								H - Ascorbic Acid T - TSP Dodecahydrate	
								I - Ice U - Acetone	
								J - DI Water V - MCAA	
								K - EDTA W - pH 4.5	
								L - EDA Z - other (specify)	
								Other:	
								Special Instructions/Note:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=Water, S=solid, C=Composite, E=Extract, A=Air)	
2013-WMU14-1A (5-7)		01/09/14		1444		G		Solid	
2013-WMU14-1A (5-7) MS		01/09/14		1444		G		Solid	
2013-WMU14-1A (5-7) MSD		01/09/14		1444		G		Solid	
NMU-3DA (2-4)		01/09/14		1508		G		Solid	
NMU-30A (2-4) MS		01/09/14		1508		G		Solid	
NMU-30A (2-4) MSD		01/09/14		1508		G		Solid	
DUP 7		01/09/14		-		G		Solid	
DUP 8		01/09/14		-		G		Solid	
ECD-1A (0.0.5)		01/09/14		1546		G		Solid	
ECD-1A (0.5-2)		01/09/14		1547		G		Solid	
ECD 2A (0.0.5)		01/09/14		1554		G		Solid	
Possible Hazard Identification									
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: JESHA JENSEN		Date/Time: 01/10/14 1530		Company: GOLDER		Received by: JESHA JENSEN		Date/Time: 11/01/14 1530	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:			

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

### Client Information

Client Contact  
Christina Higginbotham

Company  
Golder Associates Inc.

Address  
500 Century Plaza Drive Suite 190

City  
Houston

State Zip  
TX, 77073

Phone  
281-821-6868(Tel) 281-821-6870(Fax)

Email  
Christina.Higginbotham@golder.com

Project Name  
Exide Recycling Center, Frisco TX Project

Site  
EXIDE-RESU

Sampler  
CHARS TREVINO

Phone  
817-808-8144

Due Date Requested:

TAT Requested (days):  
5 WD TRRP

Purchase Order Requested

PO #

WFO #

Project #

SSOW#

Lab PM:  
Joiner, Dean A

E-Mail:  
dean.joiner@testamericainc.com

Carrier Tracking No(s):

COC No:  
600-25571-9015.1

Page  
3

Job #

### Sample Identification

EUO-2A (0.5-2)

EUO-8A (0.5-2) (0-0.5)

2013-504-3B (0-0.5)

RINSE BLANK-CMS

2013-AD-03 (0-0.5)

2013-AD-03 (2-4)

MW-3b (0-2)

MW-35 (1-3)

2013-50A-4B (0-0.5)

5CC-5B (0-0.5)

Sample Date

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

01/09/14

Sample Time

1555

1559

1605

1625

1310

1312

1313

0900

1000

0841

0851

Sample Type

G

G

G

G

G

G

G

G

G

G

Matrix

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Solid

Field Filtered Sample (Yes or No)

X

X

X

X

X

X

X

X

X

X

Perform MS/MSD (Yes or No)

N

N

N

N

N

N

N

N

N

N

8260B - Target Compound List

N

N

N

N

N

N

N

N

N

N

8270C\_LL - (MOD) Target Compound List

N

N

N

N

N

N

N

N

N

N

8270C\_LL - (MOD) PAH List

N

N

N

N

N

N

N

N

N

N

TX\_1005 - Local Method

N

N

N

N

N

N

N

N

N

N

TX\_1006 - Local Method (Hold for TPH 1005 results)

N

N

N

N

N

N

N

N

N

N

9056\_28D - Sulfate

N

N

N

N

N

N

N

N

N

N

6010B - Cd,Pb

N

N

N

N

N

N

N

N

N

N

6010B - As,Cd,Pb,Se

N

N

N

N

N

N

N

N

N

N

Moisture

N

N

N

N

N

N

N

N

N

N

8082 PCB

N

N

N

N

N

N

N

N

N

N

Total Number of containers

X

X

X

X

X

X

X

X

X

X

Special Instructions/Note:

HOLD

HOLD

HOLD

HOLD

HOLD

HOLD

HOLD

HOLD

HOLD

HOLD

Preservation Codes:

A - HCL  
B - NaOH  
C - Zn Acetate  
D - Nitric Acid  
E - NaHSO4  
F - MeOH  
G - Ammonia  
H - Ascorbic Acid  
I - Ice  
J - DI Water  
K - EDTA  
L - EDA  
M - Hexane  
N - None  
O - AsNaO2  
P - Na2CO3  
Q - Na2SO3  
R - Na2S2O3  
S - H2SO4  
T - TSP Dodecahydrate  
U - Acetone  
V - MCAA  
W - pH 4.5  
Z - other (specify)

Empty Kit Relinquished by:

Relinquished by: JOHN JACZEN

Relinquished by:

Relinquished by:

Custody Seals Intact: ☐ Yes ☐ No

Date:

01/10/14 1530

Date/Time:

Date/Time:

Time:

01/10/14 1530

Received by:

Received by:

Method of Shipment:

Received by: WILLIAM

Received by:

Received by:

Disposal By Lab

Archive For

Months

Special Instructions/QC Requirements:

Cooler Temperature(s) °C and Other Remarks:

# TestAmerica-Houston

6310 Rothway Street  
Houston, TX 77040

Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

### Client Information

Client Contact: Christina Higginbotham  
Company: Goldier Associates Inc.

Sampler: CH245 T22611ND  
Phone: 817-808-8144

Lab PM: Joinder, Dean A  
E-Mail: dean.joinder@testamericainc.com

Carrier Tracking No(s):

COC No: 600-25571-9015.1

Page: 4

Address: 500 Century Plaza Drive Suite 190

City: Houston  
State: TX  
Zip: 77073

Phone: 281-821-6888 (Tel) 281-821-6870 (Fax)

Email: Christina.Higginbotham@goldier.com

Project Name: Exide Recycling Center, Frisco TX Project

Site: EXIDE-FALSCO

### Analysis Requested

Due Date Requested:	
TAT Requested (days):	5 WD TRRP
PO #:	
Purchase Order Requested	
WO #:	
Project #:	60004831
SSOW#:	

Field Filtered Sample (Yes or No)	
Perform MS/MSD (Yes or No)	
8260B - Target Compound List	
8270C_LL - (MOD) Target Compound List	
8270C_LL - (MOD) PAH List	
TX_1005 - Local Method	
TX_1006 - Local Method (Hold for TPH 1006 results)	
9056_28D - Sulfate	
6010B - Cd,Pb	
6010B - As,Cd,Pb,Se	
Moisture	
8082 PCB	
6010B - Pb	
Total Number of containers	

Special Instructions/Note:

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2OAS
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecylhydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4.5
L - EDA	Z - other (Specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=wash, B=brine, A=air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	8270C_LL - (MOD) Target Compound List	8270C_LL - (MOD) PAH List	TX_1005 - Local Method	TX_1006 - Local Method (Hold for TPH 1006 results)	9056_28D - Sulfate	6010B - Cd,Pb	6010B - As,Cd,Pb,Se	Moisture	8082 PCB	Total Number of containers	Special Instructions/Note:
544-SA (0-0.5)	01/10/14	0859	G	Solid															
2013-CUFT-14 (0-2)		0913	G	Solid															
2013-CUFT-14 (2-4)		0914	G	Solid															
2013-CUFT-11 (0-0.5)		0918	G	Solid															
2013-CUFT-11 (0.5-2)		0919	G	Solid															
2013-CUFT-11 (2-4)		0920	G	Solid															
2013-CUFT-5B (0-0.5)		0940	G	Solid															
2013-CUFT-5A (0-0.5)		0943	G	Solid															
2013-CUFT-5D (0-0.5)		0952	G	Solid															
2013-CUFT-5D (2-4)		0953	G	Solid															
2013-CUFT-5D (4-6)		0954	G	Solid															

### Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months

Empty Kit Relinquished by:

Date:

Time:

Method of Shipment:

Relinquished by: JESHA DANZON

Date/Time: 6/10/14 1530

Company: GARDER

Received by: JESHA DANZON

Date/Time: 6/10/14 1530

Company: GARDER

Relinquished by:

Date/Time:

Company:

Received by:

Date/Time:

Company:

Custody Seals Intact:

Custody Seal No.:

Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks:



## Chain of Custody Record

000000

<b>Client Information</b>		Sampler: <b>CHRIS TREUNO</b>	Lab PM: <b>Joel Dean A</b>	Carrier Tracking No(s):	COC No: <b>600-25571-9015.1</b>
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>817-808-8144</b>	E-Mail: <b>dean.joel@testamericainc.com</b>		Page: <b>5</b>
Company: <b>Golder Associates Inc.</b>				Job #: <b>1302086</b>	
Address: <b>500 Century Plaza Drive Suite 190</b>		Due Date Requested:		Preservation Codes:	
City: <b>Houston</b>		TAT Requested (days): <b>5 WD TRRP</b>		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Acetic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
State, Zip: <b>TX, 77073</b>		PO #:		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Phone: <b>281-821-6868(Tel) 281-821-6870(Fax)</b>		Purchase Order Requested			
Email: <b>Christina.Higginbotham@golder.com</b>		MO #:			
Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		Project #:			
Exide Recycling Center, Frisco TX Project		60004831			
Site: <b>Exide-PCUSO</b>		SSOW#:			
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Monomer, Spill, Over-sight, BT=Transit, AA=Al)
2013-CUFT-5B (6-8)		01/10/14	0955	G	Solid
2013-CUFT-5B (8-10)			0956	G	Solid
2013-CUFT-6A (0-0.5)			1014	G	Solid
2013-CUFT-6C (0-0.5)			1022	G	Solid
2013-CUFT-6C (2-4)			1023	G	Solid
2013-CUFT-6C (2-4) MS			1024	G	Solid
2013-CUFT-6C (2-4) MS			1025	G	Solid
2013-CUFT-6C (4-6)			1026	G	Solid
2013-CUFT-6C (6-8)			1026	G	Solid
2013-CUFT-6C (8-10)			1026	G	Solid
DUP 9				G	Solid
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <b>JOHN HIGGINBOTHAM</b>		Date/Time: <b>01/10/14 1530</b>		Received by: <b>MADELORE</b>	
Relinquished by:		Date/Time:		Received by: <b>ADAM</b>	
Relinquished by:		Date/Time:		Received by: <b>ADAM</b>	
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b>		Sampler:	CHAS MENDO		Lab Pk:	Dean A		Carrier Tracking No(s):	COC No:	
Client Contact: Christina Higginbotham		Phone:	817-808-8144		E-Mail:	dean.joiner@testamerica.com			600-25571-9015.1	
Company: Golder Associates Inc.		Due Date Requested:		Analysis Requested		Job #:		1502086		
Address: 500 Century Plaza Drive Suite 190 Houston, TX 77073		TAT Requested (days): 5 WD TRRP								
State Zip: TX, 77073		PO #: Purchase Order Requested								
Phone: 281-821-6868(Te) 281-821-6870(Fax)		WFO #:								
Email: Christina_Higginbotham@golder.com		Project #: 60004831								
Project Name: Exide Recycling Center, Frisco TX Project		SSOW#:								
Site: EXIDE-RESC										
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=oil, etc.)	Field Filtered Sample (Yes or No)				
2013-CUFT-BB (0-0.5)		10/14	1041	G	Solid	Perform MS/MSD (Yes or No)				
2013-CUFT-SC (0-0.5)		10/51	1051	G	Solid	8260B - Target Compound List				
2013-CUFT-7B (0-0.5)		11/08	1108	G	Solid	8270C_LL - (MOD) Target Compound List				
2013-CUFT-7B (2-4)		11/05	1105	G	Solid	8270C_LL - (MOD) PAH List				
2013-CUFT-7B (4-6)		11/10	1110	G	Solid	TX_1005 - Local Method				
2013-CUFT-7B (6-8)		11/11	1111	G	Solid	TX_1006 - Local Method (Hold for TPH 1005 results)				
2013-CUFT-7B (8-10)		11/12	1112	G	Solid	9056_28D - Sulfate				
2013-CUFT-10D (0-0.5)		11/25	1125	G	Solid	6010B - Cd,Pb				
2013-CUFT-10D (2-4)		11/26	1126	G	Solid	6010B - As,Cd,Pb,Se				
2013-CUFT-10D (4-6)		11/27	1127	G	Solid	Moisture				
2013-CUFT-10D (6-8)		11/28	1128	G	Solid	8082 PCB				
<b>Possible Hazard Identification</b>										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological										
Deliverable Requested: I, II, III, IV, Other (specify)										
Empty Kit Relinquished by:		Date:								
Relinquished by:		Date/Time:								
Relinquished by:		Date/Time:								
Relinquished by:		Date/Time:								
Custody Seals Intact:		Custody Seal No.:								
A Yes A No										
Cooler Temperature(s) °C and Other Remarks:										
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>										
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months										
Special Instructions/QC Requirements:										
Method of Shipment:										
Received by:		Date/Time:								
Received by:		Date/Time:								
Received by:		Date/Time:								
Received by:		Date/Time:								
Company:										
Company:										
Company:										
Company:										

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6/8/2015



**Upton, Cathy**

**From:** Upton, Cathy  
**Sent:** Tuesday, March 04, 2014 3:13 PM  
**To:** Upton, Cathy  
**Subject:** FW: Additional Metals in Soil

Dean,

We would like to report all five metals for the samples listed below. Do you think we could get revised reports for these by Wednesday?

Location ID	Sample ID	lab_sample_id	Date Sampled	Antimony	Arsenic	Cadmium
2013-SL-C15	2013-SL-C15 (0-6)	600-84633-7	2013-12-19	NA	NA	2.10
MW-42	MW-42 (0.5-2)	600-85318-20	2014-01-08	NA	13.9	1.82
MW-27B	MW-27B (0-2)	600-85318-24	2014-01-09	NA	NA	9.85
D-11A	D11A (0-0.5)	600-85318-30	2014-01-09	NA	<b>27.2</b>	1.77
2013-BSA-2A	2013-BSA-2A(0-2)	600-85318-36	2014-01-09	NA	<b>34.9</b>	16.5
ECO-2A	ECO-2A (0-0.5)	600-85389-18	2014-01-09	NA	NA	3.29
ECO-8A	ECO-8A (0-0.5)	600-85389-20	2014-01-09	NA	NA	5.65
2013-AD-3	2013-AD-03 (0-0.5)	600-85389-23	2014-01-09	NA	NA	1.51
SCC-5B	SCC-5B (0-0.5)	600-85389-29	2014-01-10	NA	NA	2.48
2013-CUFT-10B	2013-CUFT-10B (0-0.5)	600-85389-63	2014-01-10	NA	NA	2.19
SRB-VS-11A	SRB-VS-11A (0-0.5)	600-85473-15	2014-01-10	NA	NA	1.44
2013-FWFS-5A	2013-FWFS-5A (0-2)	600-85473-34	2014-01-13	NA	NA	0.52
2013-MW-17B	2013-MW-17B (0-0.5)	600-85473-38	2014-01-13	NA	NA	5.19
SCC-10B	SCC-10B (0-0.5)	600-85473-39	2014-01-13	NA	NA	1.85
2013-C2L-06	2013-C2L-06 (0-0.5)	600-85636-21	2014-01-14	NA	<b>22.6</b>	3.68
ECO-7D	ECO-7D (0-0.5)	600-85636-39	2014-01-14	NA	15.1	2.30

Thanks,  
 Anne

**Anne Faeth-Boyd, R.G., P.E.** | Senior Project Engineer | **Golder Associates Inc.**

820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301

**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
**www.golder.com**

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**Upton, Cathy**

**From:** Higginbotham, Christina [Christina\_Higginbotham@golder.com]  
**Sent:** Tuesday, May 06, 2014 5:02 PM  
**To:** Upton, Cathy; Joiner, Dean  
**Cc:** Thomas, Jim; Faeth-Boyd, Anne  
**Subject:** Exide discrepancies - metals reporting  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy and Dean,

The below revisions are being requested so the final laboratory reports are consistent with tabulated data that was already submitted.

It appears that some metals noted below were reported in an earlier package, and removed for the later data packages. We would like the specified data (see highlights) turned back "on" please.

Please let us know estimated time for these revisions, or if you have any questions regarding this request.

Thanks,  
 Christina

**600-85636 REVISION**

				Sb	As	Cd	Pb	Se		
2013-STB-4A	2013-STB-4A (2-4)	600-85636-1	2014-01-13	NA	NA	NA	NA	1540	NA	REPORT CADMIUM (confirm Cd concentrat

**600-85318 REVISIONS**

2013-C2L-03	2013-C2L-03-(0-0.5)	600-85318-33	2014-01-09	NA	12.2	0.651	79.5	< 0.330 U	REPORT ARSENIC AND SELENIUM
D-12A	D12A (0-0.5)	600-85318-31	2014-01-09	NA	10.9	0.652 b	80.2	< 0.324 U	REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se
MW-41	MW-41 (0.5-2)	600-85318-18	2014-01-08	NA	10.1	0.810	92.5	< 0.338 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-41	MW-41 (0-0.5)	600-85318-17	2014-01-08	NA	8.00	0.474	18.4	< 0.323 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	DUP-6	600-85318-21	2014-01-08	NA	7.39	0.385	15.0	< 0.311 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	MW-42 (0-0.5)	600-85318-19	2014-01-08	NA	14.2	1.56	230	0.580 J	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
									REPORT ARSENIC AND SELENIUM

**600-85473 REVISIONS**

2013-NT-01	2013-NT-01 (0.2-2)	600-85473-21	2014-01-10	NA	14.4	0.618	18.5	0.546 J	Report from 1/22 has results for As and Se. only lists Pb and Cd, 4/21 only lists Cd and F
									REPORT ARSENIC AND SELENIUM , also ple interval to "0.5-2" instead of "0.2-2".
2013-NT-01	2013-NT-01 (0-0.5)	600-85473-20	2014-01-10	NA	15.9	0.571	19.5	< 0.328 U	Report from 1/22 reports As and Se. Rev 3 4/21 does not.
									REPORT ARSENIC AND SELENIUM
2013-NT-02	2013-NT-02 (0.5-2)	600-85473-24	2014-01-10	NA	14.1	0.354	21.2	0.324 J	Report from 1/22 reports As and Se. Rev 3 4/21 does not.
									REPORT ARSENIC AND SELENIUM
2013-NT-02	2013-NT-02 (0-0.5)	600-85473-23	2014-01-10	NA	14.9	4.89	837	0.654 J	Report from 1/22 reports As and Se. Rev 3 4/21 does not.
									REPORT ARSENIC AND SELENIUM

**600-85389 REVISION**

2013-WMU14-1A (5-7)	600-85389-12	1/9/2014	na	na	5.14 J	17000	na	REPORT CADMIUM (confirm Cd concentratio
DUP-7	600-85389-14	1/9/2014	na	na	na	10500	na	REPORT CADMIUM (if 85389-12 is confirmed

Christina Higginbotham, P.G. | Remediation Project Manager | Golder Associates Inc.

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## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-85389-1

**Login Number: 85389**

**List Source: TestAmerica Houston**

**List Number: 1**

**Creator: Capps, Dana R**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	2.0/1.5
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.	False	Refer to Job Narrative for details.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

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<b>Sample Dates:</b>	January 8 & 9, 2014	<b>Project No.:</b>	1302086
<b>Laboratory:</b>	Test America (Houston TLAP Certification T104704223)	<b>Client:</b>	Exide Technologies Inc.
<b>Work Orders:</b>	Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4		
<b>Intended Use</b>	Affected Property Assessment Report (APAR) Addendum		
<b>Site:</b>	Exide Former Operating Plant (FOP), 7471 5 <sup>th</sup> Street, Frisco, TX		

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## TESTS/ METHODS

Volatile Organic Compounds (VOCs) by SW-846 8260B – Gas Chromatography (GC)/Mass Spectrometry (MS)

Low Level Semivolatile Organic Compounds by SW-846 8270C – GC/MS

Texas Total Petroleum Hydrocarbons (TPH) by TX1005 – GC

Polychlorinated Biphenyls (PCBs) by SW-846 8082 – Gas Chromatography (GC)

Total Metals by SW-846 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP)

## SAMPLES

28 soil samples (1 of which was subjected to the Synthetic Precipitation Leaching Procedure (SPLP)), 1 field duplicate, 2 equipment rinsate blanks, 1 field blank, 1 trip blank, and 1 field MS/MSD pair. See Table 1 for a complete cross-referenced listing of samples. Thirteen additional soil samples were collected but archived by the laboratory for possible future analysis.

Golder completed a review of the above chemical analysis data for conformance with the requirements of the Texas Risk Reduction Program (TRRP) guidance document, Review and Reporting of COC Concentration Data (RGG-366/TRRP-13 Revised May 2010) and for adherence to project objectives. The results of the review are discussed in this data usability summary (DUS).

Golder completed the review using the following laboratory and project submittals:

- Laboratory reportable data as defined in TRRP-13;
- Laboratory review checklists (LRC) with the associated exception reports;
- Laboratory Electronic Data Deliverable (EDD); and
- Project field notes from the sampling event.



The review of the reportable data included the quality control (QC) parameters listed below, as required per TRRP-13, using the applicable analytical method and project requirements:

- Data Completeness
- Chain-of-Custody Procedures
- Sample Condition - Holding Time, Preservation, and Containers
- Field Procedures
- Results Reporting Procedures
- Laboratory and Field QC Blanks
- Laboratory Control Spike and Matrix Spike Recoveries
- Surrogate Recoveries
- Laboratory and Field Duplicate Precision

Additionally, Golder used the LRC to evaluate the following QC parameters:

- Method Quantitation Limits (MQLs)
- Method Detection Limits (MDLs)
- Instrument Tuning, Calibration, and Performance
- Internal Standards

Criteria used for this data usability review are as follows:

- Organics: 60-140% spike recovery (and not less than 10% or data is rejected) and +MQL difference or 40% RPD (for laboratory duplicates) as recommended in TRRP-13;
- Inorganics: 70-130% spike recovery (and not less than 30% or data is rejected) and +MQL difference or 30% RPD (for laboratory duplicates) as recommended in TRRP-13; and
- Soil Samples: + 3x MQL difference (if either result is less than 5x MQL) or 50% RPD (for field duplicates) as recommended in TRRP-13.

If an item was found outside of the review criteria, the reviewer applied a data qualifier (DQ) and bias code to the results for the affected samples in accordance with TRRP-13. A list of all qualified results and definitions of the qualifier and bias codes are given in Table 2.

## GLOSSARY OF TERMS

The following definitions apply for terms related to analyte reporting limits:

MDL (Method Detection Limit) – the minimum concentration of an analyte that the laboratory can measure and report with 99% confidence that the analyte concentration is greater than zero. The MDL is



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## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

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determined by the laboratory for each analyte in a given reagent matrix (water or soil) generally using the procedures specified in 40 CFR Part 136, Appendix B. It is a measure of the concentration an instrument can detect or 'see' in a given reagent matrix. TRRP-13 requires that the laboratory routinely check the MDL for reasonableness.

SDL (Sample Detection Limit) – the MDL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and taking into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can detect or 'see' in a given sample. For TRRP, non-detects are reported using the SDL. This term was originally called the SQL (Sample Quantitation Limit) before the TRRP rule revisions effective March 19, 2007.

Unadjusted MQL (Method Quantitation Limit) – the lowest non-zero concentration standard in the laboratory's initial calibration curve calculated using the normal aliquot sizes and final volumes prescribed in the analytical method. The unadjusted MQL is reported by the laboratory for each analyte in a given matrix (water or soil). It is a measure of the concentration an instrument can accurately measure in a typical sample. Per TRRP, the Unadjusted MQLs should be below the Levels of Required Performance (LORPs) for purposes of assessment as well as demonstration of conformance with critical Protective Concentration Levels (PCLs).

MQL – the unadjusted MQL adjusted to reflect sample-specific actions, such as dilution or use of smaller aliquot sizes than prescribed in the analytical method, and takes into account sample characteristics, sample preparation, and analytical adjustments including dry-weight adjustments. It is a measure of the concentration an instrument can accurately measure in a given sample. Analytes with concentrations above the SDL but below the MQL, though present in the sample, may not be accurately measured and are thus flagged as estimated (J).

## LABORATORY CERTIFICATION

At the time the laboratory data were generated for this project, the laboratory was NELAC accredited under the Texas Laboratory Accreditation Program (TLAP) for the matrices, methods and parameters of analysis requested on the chain-of-custody forms. A copy of the applicable pages of the laboratory's National Environmental Laboratory Accreditation Program (NELAP) certificate valid during the period in which the laboratory generated the data in this report is also included in Appendix C to the Supplement to the Affected Property Assessment Report.



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

### USABILITY SUMMARY

1. Usability of Unqualified Non-Detects – Non-detects are reported at the sample detection limit (SDL) as required per TRRP. Additionally, according to the LRC, an MDL study was performed for each analyte and the MDLs were checked for reasonableness for each applicable analyte. The levels of required performance (LORPs) have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1  $^{Tot}Soil_{Comb}$  and Tier 1, 2 or 3  $^{GW}Soil_{Ing}$  PCLs for a 30-acre source area for metals, or 0.5 acre source area for organics. As needed per TRRP, the Unadjusted MQL stated by the laboratory is at or below the LORP for each applicable analyte, and thus the analytical methods are appropriate and the results can be used to demonstrate conformance with the criteria. The MQLs for some SVOCs, although the low-level method was used, did not meet LORPs for the following: 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Nitroaniline, 2-Nitrophenol, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4,6-Dinitro-2-methylphenol, 4-Chloroaniline, 4-Chlorophenyl-phenylether, 4-Nitroaniline, 4-Nitrophenol, Benzidine, Bis(2-chloroethoxy)methane, Bis(2-chloroethyl) Ether, Bis(2-chloroisopropyl) Ether, N-Nitrosodimethylamine, N-Nitroso-di-n-propylamine, and Pentachlorophenol.
2. Usability of Qualified Data – There are no major QC deficiencies, and thus all data is usable as qualified for the intended use. As shown in Table 2, the reviewer qualified some detects as estimated (J) due to minor QC deficiencies. Detects that are biased high can be used; however, the reported concentration may be high. Detects that are estimated may be either low or high. Results with a laboratory J-flag (i.e., at a concentration between the SDL and MQL) should be considered estimates. The actual value is not expected to exceed the sample MQL.

Reviewer: Jing Song Xi 8/25/15

### QUALITY CONTROL PARAMETERS AND OUTCOMES

#### Data Completeness

The laboratory data packages contain all necessary data (i.e., the laboratory reportable data per TRRP-13) and the EDD contain all sample results in acceptable format. Minor revisions have been made for work orders 600-85318-1 and 600-85318-2. All revisions are detailed in the laboratory narratives.

#### Chain-of-Custody

Proper sample custody procedures were used, which confirms that the integrity of the samples was maintained. Additionally, the information on the custody records is complete and agrees with that in the field notes and laboratory reports, except as follows:

- Minor instances of container labels not matching information listed on the COC, or samples being listed on the COC but not received by the laboratory. These inconsistencies have been addressed by the laboratory and do not affect sample results.





## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

### Sample Condition

Samples were collected in appropriate containers, properly preserved in the field, and prepared and analyzed within the holding times as required in the analytical methods, which ensures that the samples were not affected by analyte degradation:

- For 600-85318, the temperatures of the coolers at receipt were 3.0°C and 3.9°C.

### Field Procedures

The samples were collected and placed immediately into sterilized jars provided by the laboratory and then into a cooler with ice for overnight delivery to the laboratory.

1 field duplicate, 2 equipment rinsate blanks, 1 field blank, 1 trip blank, and 1 field MS/MSD pair were collected with the 28 investigative samples.

### Results Reporting Procedures

The hardcopy analytical results include a Result, MQL (adjusted), and SDL. The EDD includes the MDL, SDL (under the SQL column per previously used terminology) and the MQL, which is not adjusted for sample specific factors.

Results are reported in mg/kg with dry-weight correction for the metals. Non-detects are reported using the SDL as specified per TRRP and detects between the SDL and MQL are reported with a laboratory J-flag. The concentration reported for detects between the SDL and MQL is below the calibration range and thus is considered estimated.

**MQLs-** The LORPs have been established by Golder/PBW as the Residential Assessment Levels (RALs), which are the minimum of the TRRP residential Tier 1 Tier 1 <sup>Tot</sup>Soil<sub>Comb</sub> and Tier 1, 2 or 3 <sup>GW</sup>Soil<sub>Ing</sub> PCLs for a 30-acre source area for metals or 0.5 acre source area for organics. The Unadjusted MQLs for the laboratory are at or below the LORPs for each applicable analyte, except for some SVOCs as previously stated.

**MDLs-** According to the LRC, an MDL study was performed for each analyte, and the MDLs were checked for reasonableness and either adjusted or supported by the analysis of detectability check standards (DCS) for each applicable analyte as required per TRRP-13. Results for the DCS are included in the data packages.

**Laboratory Blanks** – Results for samples prepared in the same QC batch as a contaminated method blank may be affected by laboratory contamination. Laboratory blanks did not exhibit analytes above the MDL, except as follows:



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

- Batch 124919 contained cadmium above the MDL. Cadmium concentrations in associated preparation batch samples -16 -30, -31 were greater than 5x the MB concentration; therefore no qualification was required.
- Batch 125242 contained toluene above the MDL. The toluene concentration in the preparation batch sample -08 was detected at <5x MB concentration and is qualified as undetected in Table 2.
- Batch 125220 contained butyl benzyl phthalate, diethyl phthalate, and di-n-butyl phthalate above the MDL. Diethyl phthalate, and di-n-butyl phthalate concentrations in the preparation batch samples -03 and -07 that were detected at <10x MB concentration are qualified as undetected in Table 2.
- Batch 124797 contained arsenic above the MDL. Arsenic was not detected in the associated preparation batch samples.

## Field QC Blanks

Two equipment rinsate blanks were collected to document sufficient field decontamination procedures for soil sampling devices. Results for samples collected with a contaminated rinsate blank may be affected by field contamination. One field blank was collected to document if contamination is present in the surrounding air at time of sampling. A field blank with detected analytes may indicate the presence of contamination in the surrounding air not representative of the sample collected. No analytes were detected in the field QC blanks, except for the following:

Lab Package	Field Sample ID	Sample Date	Analyte	Blank Concentration
600-85318-23	Rinse Blank CME	1-9-2014	Cadmium	0.0006 J mg/L
600-85272-40	Rinse Blank aeo	1-9-2014	Acetone	0.0149 mg/L
			Toluene	0.00227 J mg/L

Results for samples collected with a contaminated rinsate blank may be affected by field contamination. These samples were prepared in batches separate from the analysis of solids. Samples 600-85318-24, -25, -26, and -27 exhibited detections of some combination of the analytes mentioned above, however, a direct correlation cannot be made. Results for the above mentioned analytes are qualified as J in Table 2. No VOCs were detected in the trip blank.

## Laboratory Control Sample

The laboratory prepared one laboratory control sample (LCS) for each analytical batch and reported recoveries for all of the analytes for each test. The LCS recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample, free of matrix effects, except for the following:

- Benzidine was recovered outside the TRRP specifications for preparation batch 125220. All associated samples in the preparation batch are qualified as UJ in Table 2.



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

### Matrix Spike Recovery

The laboratory prepared one or more matrix spike (MS) and matrix spike duplicate (MSD) with each analytical batch plus a Post Digestion Spike (PDS) with each metals analytical batch. MS/MSD recoveries are reported for the same analytes as the LCS for MS/MSD prepared using a sample from the site, which includes 1 MS/MSD, as shown in Table 1.

PDS outcomes are given on the LRC for each job package; however PDS data are not reportable data per TRRP-13. According to the LRC, the PDS met method requirements, which indicates good accuracy for the analysis technique on the given sample matrix.

The MS/MSD recoveries are within the TRRP recommended criteria, which indicates good accuracy for the preparation and analysis technique on a sample free of matrix effects, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	Spike Amount for MS/MSD (mg/kg)	MS % Recovery	MSD % Recovery	Qual
124836	600-85318-14	MW-27D (0.5-2)	Antimony	2.05	63.9, 62.6	39	41	JL
124836	600-85318-14	MW-27D (0.5-2)	Lead	315	63.9, 62.6	377	146	-
124836	600-85318-20	MW-42 (0.5-2)	Antimony	0.287	63.6, 61.9	26	24	JL
124836	600-85318-20	MW-42 (0.5-2)	Lead	241	63.6, 61.9	-253	-268	-
125018	600-85318-36	2013-BSA-2A (0-2)	Antimony	17.1	61.4, 60.2	24	18	JL
125018	600-85318-36	2013-BSA-2A (0-2)	Arsenic	34.9	61.4, 60.2	52	49	JL
125018	600-85318-36	2013-BSA-2A (0-2)	Lead	2880	61.4, 60.2	-1628	-2420	-

NA – Not available. The PDS for this batch was performed using another sample

In all cases where the spike amount is less than four times the result in the unspiked parent sample such as with lead, the data are considered inconclusive and the MS/MSD recovery check is waived.

### Surrogate Recovery

Surrogate recoveries were within acceptable limits, except for the following:

- For Method 8270C, Sample 600-85318-3 recovered low for Phenol-d5. The laboratory's standard operating practice allows 1 base and 1 acid of the six surrogates used to be outside acceptance criteria without performing re-extraction/re-analysis according to the laboratory. Since only one compound was outside of control limits, qualification was not required per TRRP-13.
- For Method 8270C, samples 600-85318-1, 600-85318-8, 600-85318-24 required a dilution due to the nature of the sample matrix, therefore the surrogate spike concentration was reduced to a level where the recovery calculation does not provide



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

useful information. Qualification was not performed due to the dilution of the surrogates out of the matrix.

- For Method TX1005, Sample 600-85318-8 recovered high for o-Terphenyl. Evidence of matrix interference is present, therefore, re-extraction/re-analysis was not performed according to the laboratory. Since this is the only surrogate spike compound for this Method, this sample has been qualified accordingly as JH.

## Laboratory Duplicate Precision

The laboratory prepared one or more Matrix Spike Duplicate (MSD) with each analytical batch for each test. Additionally, the laboratory prepared one Matrix Duplicate (MD) with each metals batch. RPDs are reported for the same analytes as the LCS for MSD/MD prepared using a sample from the site, which includes 1 MSD (and MD for Total Metals). Non-homogenous samples can impact the apparent method precision.

The MSD and MD RPDs are within the TRRP recommended criteria, which indicates good precision for the preparation and analysis technique for the given sample matrix, except as follows:

QC Batch	Lab Sample ID	MS/MSD ID	Analyte	Parent Amount (mg/kg)	MSD RPD	MD RPD	Qual
125018	600-85318-36	2013-BSA-2A (0-2)	Arsenic	34.9	4	82	J
125018	600-85318-36	2013-BSA-2A (0-2)	Selenium	1.07 J	1	35	J
124836	600-85318-20	MW-42 (0.5-2)	Cadmium	1.82	2	118	J
124836	600-85318-20	MW-42 (0.5-2)	Lead	241	7	166	J

## Field Duplicate Precision

One field duplicate was collected with the samples and analyzed for arsenic, cadmium, lead and selenium. Results are summarized in Table 3. The RPDs (or the absolute difference between results for concentrations <5x MQL and for non-detects) are within the TRRP criteria, which indicates good precision for the sampling, preparation, and analysis technique on the given sample matrix, except as follows:

- The results for Total arsenic, cadmium, and lead are outside the criteria for the pair collected at MW-42 (0.5-2). These results have been qualified as J accordingly in Table 2.

## Instrument Tuning

According to the LRC, instrument tuning met method requirements for the samples, which indicates the GC/MS instrument was properly set up to identify analytes.



## Data Usability Summary

Test America Work Orders: 600-85318-1, 600-85318-2, 600-85318-3, 600-85318-4

### Instrument Calibration

According to the LRC, initial and continuing calibration data met method requirements for all reported results, which indicates the instruments were properly calibrated to measure analyte concentrations, except for the following:

- For Method 8270C, the continuing calibration verification (CCV) associated with batch 125471 recovered above the upper control limit for benzyl alcohol. The samples associated with this CCV were non-detect for the affected analyte and qualified as UJ in Table 2.

### Instrument Performance

According to the LRC, the serial dilution and ICP interference check samples met method requirements, which indicates that no significant matrix interference exists, except as follows:

- The interference check standard solution associated with batch 125051 showed results for arsenic, cadmium, and lead at a level greater than 2 times the LOD. Since this analyte was not detected in the field sample associated with the batch, no qualification was required.

### Internal Standards

According to the LRC, area counts and retention times were within method requirements, except for the following:

- For Method 8270C, various internal standards responses were outside of acceptance limits. Affected samples were reanalyzed (including dilutions) but sample matrix appeared to impact responses. Chrysene response was outside of the method required acceptance limit for MW-27A (0-2). Phenanthrene response was outside of the method required acceptance limit for 2013-MB-5 (10-12). These analytes have been qualified as JH accordingly on Table 2.

**TABLE 1**  
**CROSS REFERENCE OF FIELD SAMPLE IDENTIFICATIONS AND LABORATORY IDENTIFICATIONS**

Lab Sample ID	Field Sample ID	Prep Batch/ Analysis Batch	Sample Date	Matrix	Comments
600-85318-1	2013-FFTA-01 (0.25-2)	/125013 124920/125003	1/8/2014	Soil	
600-85318-2	2013-FFTA-02 (2-4)		1/8/2014	Soil	Not reported
600-85318-3	2013-FFTA-03 (18-19)	/125071 125220/125471 124920/125003	1/8/2014	Soil	
600-85318-4	2013-MB-3 (0.75-1.25)	/125071 124836/124882	1/8/2014	Soil	
600-85318-5	2013-MB-3 (1.25-2)	127810/127873	1/8/2014	Soil	
600-85318-6	2013-MB-3 (2-4)		1/8/2014	Soil	Not reported
600-85318-7	2013-MB-5 (0.5-5)	/125071 125220/125471 124920/125003 124836/124882 128791/128837	1/8/2014	Soil	
600-85318-8	2013-MB-5 (10-12)	/125242 124920/125003 124836/124882	1/8/2014	Soil	
600-85318-9	2013-MB-5 (14-16)	127709/127767	1/8/2014	Soil	
600-85318-10	2013-MB-5 (18-20)		1/8/2014	Soil	Not reported
600-85318-11	2013-MB-4 (0.83-1.33)	/125071 124836/124882	1/8/2014	Soil	
600-85318-12	2013-MB-4 (1.33-2)		1/8/2014	Soil	Not reported
600-85318-13	2013-MB-4 (2-4)		1/8/2014	Soil	Not reported
600-85318-14	MW-27D (0.5-2)	/125071 125220/125471 124920/125003 124836/124882	1/8/2014	Soil	
600-85318-15	MW-27D (2-4)	127709/127767	1/8/2014	Soil	
600-85318-16	MW-27C (0-2)	/125071 124982/125404 124920/125003 124919/125010	1/8/2014	Soil	
600-85318-17	MW-41 (0-0.5)	124836/124882	1/8/2014	Soil	
600-85318-18	MW-41 (0.5-2)	124836/124882	1/8/2014	Soil	
600-85318-19	MW-42 (0-0.5)	124836/124882	1/8/2014	Soil	
600-85318-20	MW-42 (0.5-2)	124836/124882	1/8/2014	Soil	site-specific MS/MSD
600-85318-21	DUP-6	124836/124882	1/8/2014	Soil	Duplicate of MW-42 (0.5-2)
600-85318-22	Field Blank	/124815	1/8/2014	Water	Field Blank
600-85318-23	Rinse Blank - CME	124797/125051	1/9/2014	Water	Rinsate Blank
600-85318-24	MW-27B (0-2)	/125071 124920/125003 124836/124882	1/9/2014	Soil	
600-85318-25	MW-27B (2-4)	127709/127767	1/9/2014	Soil	
600-85318-26	MW-27A (0-2)	/125071 124920/125003 124836/124882	1/9/2014	Soil	
600-85318-27	MW-27A (2-4)	127810/127873	1/9/2014	Soil	
600-85318-28	2013-NDA-1A (2-4)	124838/125030 127709/127767	1/9/2014	Soil	
600-85318-29	E-11C (0-0.5)	124836/124882	1/9/2014	Soil	
600-85318-30	D-11A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85318-31	D-12A (0-0.5)	124919/125010	1/9/2014	Soil	
600-85318-32	D-13A (0-0.5)	124836/124882	1/9/2014	Soil	
600-85318-33	2013-C2L-03 (0-0.5)	124836/124882	1/9/2014	Soil	
600-85318-34	2013-C2L-03 (1-2)		1/9/2014	Soil	Not reported
600-85318-35	2013-C2L-03 (4-5)		1/9/2014	Soil	Not reported
600-85318-36	2013-BSA-2A (0-2)	125018/125110	1/9/2014	Soil	
600-85318-37	2013-AD-04 (0-0.5)	124836/124882	1/9/2014	Soil	
600-85318-38	2013-AD-04 (0.5-2)		1/9/2014	Soil	Not reported
600-85318-39	2013-AD-04 (2-4)		1/9/2014	Soil	Not reported
600-85318-40	Rinse Blank - Geo	/124815 124914/125073 124950/124998 124797/125051	1/9/2014	Water	Rinsate Blank
600-85318-41	Trip Blank	/124815	1/9/2014	Water	Trip Blank

TABLE 2 - QUALIFIED DATA

Lab Sample ID	Field Sample ID	Analyte	Result	Units	Qualifier	Explanation
600-85318-1	2013-FFTA-01 (0.25-2)	Benzidine	<0.458 U	mg/kg	UJ	Analyte recovered outside TRRP specifications for preparation batch
600-85318-3	2013-FFTA-03 (18-19)	Benzyl Alcohol	<0.0125 U	mg/kg	UJ	CCV recovered above upper control limit
		Diethyl Phthalate	0.262	mg/kg	<0.9509 U	Analyte detected at less than 10x method blank concentration
		Di-n Butyl Phthalate	0.0914 J	mg/kg	<0.254 U	Analyte detected at less than 10x method blank concentration
		Benzidine	<0.0193 U	mg/kg	UJ	Analyte recovered outside TRRP specifications for preparation batch
600-85318-7	2013-MB-5 (0.5-5)	Benzyl Alcohol	<0.0151 U	mg/kg	UJ	CCV recovered above upper control limit
		Diethyl Phthalate	0.263	mg/kg	<0.9509 U	Analyte detected at less than 10x method blank concentration
		Di-n Butyl Phthalate	0.0770 J	mg/kg	<0.254 U	Analyte detected at less than 10x method blank concentration
		Benzidine	<0.0234 U	mg/kg	UJ	Analyte recovered outside TRRP specifications for preparation batch
600-85318-8	2013-MB-5 (10-12)	Toluene	0.00313 J	mg/kg	<0.01169 U	Analyte detected at less than 5x method blank concentration
		Benzidine	<2.41 U	mg/kg	UJ	Analyte recovered outside TRRP specifications for preparation batch
		TPH	Various	mg/kg	JH	o-Terphenyl recovered outside TRRP specifications
		Phenanthrene	5.36	mg/kg	JH	ISTD recovered above TRRP specifications
600-85318-20	MW-42 (0.5-2)	Antimony	<0.287 U	mg/kg	UJL	MS % recovery below TRRP specifications
		Arsenic	13.9	mg/kg	J	Field duplicate RPD above specifications
		Cadmium	1.82	mg/kg	J	Matrix and field duplicate RPD above specifications
		Lead	241	mg/kg	J	Matrix and field duplicate RPD above specifications
600-85318-24	MW-27B (0-2)	Antimony	6.99	mg/kg	JL	MS % recovery below TRRP specifications
600-85318-25	MW-27B (2-4)	Cadmium	9.85	mg/kg	J	Analyte detected in field QC blank
600-85318-26	MW-27A (0-2)	Cadmium	0.48	mg/kg	J	Analyte detected in field QC blank
		Chrysene	12	mg/kg	J	Analyte detected in field QC blank
600-85318-27	MW-27A (2-4)	Chrysene	0.0361 J	mg/kg	JH	ISTD recovered above TRRP specifications
600-85318-36	2013-BSA-2A (0-2)	Cadmium	0.547	mg/kg	J	Analyte detected in field QC blank
		Antimony	17.1	mg/kg	JL	MS % recovery below TRRP specifications
		Arsenic	34.9	mg/kg	J	Matrix duplicate RPD above specifications
		Selenium	1.07	mg/kg	J	Matrix duplicate RPD above specifications

## Note:

Detected results between the SDL and MQL (i.e., results with a laboratory J-flag) have been included in the above table since the reported concentration is below the calibration range.

J Estimated data; The analyte was detected and identified. The associated numerical value (i.e., the reported sample concentration) is the approximate concentration of the analyte in the sample.

NJ Tentatively identified, estimated data; The analysis indicates the presence of the analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.

NS Not selected; Another result (from a secondary dilution, different analytical method, re-sampling, etc.) is selected for use based on QC outcomes and/or reported concentrations.

R Rejected data; The data is unusable. Serious QC deficiencies make it impossible to verify the absence or presence of this analyte.

U Not detected; The analyte was not detected >5x (10x for common contaminants) the level in an associated blank and thus should be considered not detected above the level of the associated numerical value (i.e., the reported sample concentration).

UJ Estimated data; The analyte was not detected above the reported sample detection limit (SDL). The numerical value of the SDL is estimated and may be inaccurate.

H Bias in sample result is likely to be high

L Bias in sample result is likely to be low

**TABLE 3 - FIELD DUPLICATE PRECISION CALCULATIONS**

Duplicate and Parent Sample Field Identification	Analyte	Sample Result	Duplicate Result	RPD <sup>a</sup>	Accept or Reject	Qualifier Added
DUP-6 / MW-42 (0.5-2)	arsenic	13.9	7.39	61.2	A	J
	cadmium	1.82	0.385	130.2	A	J
	lead	241	15	176.6	A	J
	selenium	0.502 J	0.311 U	-	A	-

<sup>a</sup>  $RPD = ((SR - DR) * 200) / (SR + DR)$

A - Acceptable Data

NA - Not Analyzed

The RPD test (<50%) applies if both results are greater than 5x MQL.

Otherwise, the absolute difference test (< 3x MQL) applies.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-85318-1

Client Project/Site: Exide Recycling Center

Revision: 6

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/8/2015 7:34:47 PM

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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.

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-85318-1 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☒ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

5/9/2014

Date

Project Management Asst II

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/9/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?	X				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?		X			R04B
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				R05D
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?		X			R06A
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?		X			R07A
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?		X			R07D
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/9/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-1
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?		X			S02B
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?		X			S04A
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?	X				
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?		X			S08A
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	5/9/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-1
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R01A	<p>The following sample(s) was listed on the Chain of Custody (COC); however, no sample(s) was received: . MW-27C(0-2) AND 2013-BSA-2A-(0-2) WERE NOT RECEIVED.</p> <p>The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): EXTRA SAMPLES: 2013-AD-03-(0-0.5): 1-4oz jar 2013-AD-03-(0.5-2): 1-4oz jar 2013-AD-03-(2-4): 1-4oz jar</p> <p>JX: 2- 4oz jars 2- 2oz jars</p>
R04B	<p>Method 8270C LL: Six surrogates are used for this analysis. The laboratory's SOP allows 1 base and 1 acid of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. Samples 600-85318-3 was biased low for Phenol-d5. These results have been reported and qualified.</p> <p>Method 8270C LL: Surrogate recovery for the following sample(s) was outside control limits: 600-85318-26, 600-85318-26 MS, and 600-85318-26 MSD. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.</p> <p>Method 8270C LL: The following sample(s) required a dilution due to the nature of the sample matrix: 600-85318-1, 600-85318-8, and 600-85318-24. 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.</p> <p>Method TX 1005: Surrogate recovery for the following sample(s) was outside control limits: 600-85318-8. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.</p>
R05D	<p>Method 6010B: The method blank for batch 124797 contained Arsenic above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.</p> <p>Method 6010B: The method blank for batch 124919 contained Cadmium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.</p> <p>Method 8260B: The method blank for batch 600-125242 contained toluene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.</p> <p>Method 8270C: The method blank for batch 125220 contained Butyl benzyl phthalate, Diethyl phthalate and Di-n-butyl phthalate above the method detection limit. Phthalates are recognized potential laboratory contaminants. These target analyte concentrations were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.</p>
R06A/ R07A	<p>Method 8082: Since Aroclors are multi-component analytes, it is not possible to include all seven Aroclors of interest into the spiking mix. The only two Aroclors that were spiked were Aroclors 1016 and 1260. Since these two Aroclors essentially contain all analytes found in the other five individual Aroclors of interest, the recovery of Aroclors 1016 and 1260 in the LCS will be representative of the recovery of the other five Aroclors.</p>
R07C	<p>Method 6010B: 600-85318-36 MS and MSD failed the recovery criteria for the following analyte(s): Antimony, Arsenic, Cadmium, Lead. Matrix interference is suspected due to the high concentration of lead in the parent sample.</p> <p>Method 6010B: 600-85318-14 MS failed the recovery criteria for the following analyte(s): Antimony, Lead. Matrix interference is suspected.</p> <p>Method 6010B: 600-85318-14 MSD failed the recovery criteria for the following analyte(s): Antimony, Cadmium, Lead. Matrix interference is suspected.</p> <p>Method 6010B: 600-85318-20 MS/MSD failed the recovery criteria for the following analyte(s): Lead. Matrix interference is suspected.</p> <p>Method 6010B: 600-85318-20 MSD failed the recovery criteria for the following analyte(s): Arsenic. Matrix interference is suspected.</p> <p>Method 8270C LL: The matrix spike (MS) and matrix spike duplicate (MSD) recoveries associated with batch 125453 were biased high for Benzi[g,h,i]perylene and the MSD was also biased high for Pyrene. Matrix interference is suspected.</p>

R07D	<p>Method 6010B: 600-85318-14 MSD failed the RPD criteria for the following analyte(s): Lead. Non homogeneity of the sample is suspected.</p> <p>Method 6010B: 600-85318-36 MSD failed the RPD criteria for Lead due to the high concentration of this analyte in the parent sample.</p> <p>Method 8082: 600-85318-A-36-C MSD failed the RPD criteria for the following analyte(s): PCB-1260. Non homogeneity of the sample is suspected.</p>
R08C	<p>Method 6010B: 600-85318-14 DU failed the RPD criteria for the following analyte(s): Antimony. Non homogeneity of the sample is suspected.</p> <p>Method 6010B: 600-85318-36 DU failed the RPD criteria for the following analyte(s): Antimony, Arsenic, Selenium. Non homogeneity of the sample is suspected.</p> <p>Method 6010B: 600-85318-20 DU failed the RPD criteria for the following analyte(s): Cadmium and Lead. Non homogeneity of the sample is suspected.</p>
R10B	Method 8270C LL: The following sample(s) was diluted due to the nature of the sample matrix: 600-85318-1, 600-85318-8, and 600-85318-24. Elevated reporting limits (RLs) are provided.
S02B	Method 8270C LL: The continuing calibration verification (CCV) associated with batch 125471 recovered above the upper control limit for Benzyl alcohol. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.
S04A	Method 8270C LL: Various Internal standards (ISTD) responses were outside of acceptance limits. Effected samples were re-analyzed (including dilutions) but matrix still seems to impact ISTD responses.
S08A	Method 6010B: The interference check standard solution (ICSA) associated with batch 125051 showed results for arsenic, cadmium and lead at a level greater than 2 times the limit of detection (LOD). Since the interfering analytes were not detected in the client samples, no corrective action was required.
<ol style="list-style-type: none"> <li>1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>3. NA = Not applicable;</li> <li>4. NR = Not reviewed;</li> <li>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>	



# Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Job ID: 600-85318-1**

**Laboratory: TestAmerica Houston**

## Narrative

### Job Narrative 600-85318-1

#### Comments

Report was revised to be in TRRP UDS format on 02/19/14, replacing the final report generated on 01/28/14. The report was revised again on 03/05/14 to add total metals to samples 20, 24, 30 and 36. This final report replaces the one generated on 02/19/14. The report was revised on 03/14/14 to update the TRRP checklist, replacing the final report generated on 03/05/14. The report was revised again on 03/18/14 to update the TRRP checklist for missing ms/msd information, replacing the final report generated on 03/14/14. The report was revised again on 05/09/14 to report As and Se in addition to other metals for samples 17, 18, 19, 21, 31 and 33 per client request. This replaces the final report generated on 03/18/14. See attached email. The report was revised on 06/08/15 to include Arsenic in sample 32, replacing the final report generated on 05/09/14.

Soil samples were received in bulk jars.

#### Receipt

The samples were received on 1/10/2014 10:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0° C and 3.9° C.

Except:

The following sample(s) was listed on the Chain of Custody (COC); however, no sample(s) was received: .  
MW-27C(0-2) AND 2013-BSA-2A-(0-2) WERE NOT RECEIVED.

The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC):

EXTRA SAMPLES:

2013-AD-03-(0-0.5): 1-4oz jar

2013-AD-03-(0.5-2): 1-4oz jar

2013-AD-03-(2-4): 1-4oz jar

JX:

2- 4oz jars

2- 2oz jars



# Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL HOU
TX 1005	Texas - Total Petroleum Hydrocarbon (GC)	TCEQ	TAL HOU
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

## Protocol References:

EPA = US Environmental Protection Agency

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

TCEQ = Texas Commission of Environmental Quality

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-85318-1	2013-FFTA-01 (0.25-2)	Solid	01/08/14 10:20	01/10/14 10:31
600-85318-3	2013-FFTA-03 (18-19)	Solid	01/08/14 10:45	01/10/14 10:31
600-85318-4	2013-MB-3 (0.75-1.25)	Solid	01/08/14 12:18	01/10/14 10:31
600-85318-7	2013-MB-5 (0.5-5)	Solid	01/08/14 13:20	01/10/14 10:31
600-85318-8	2013-MB-5 (10-12)	Solid	01/08/14 13:35	01/10/14 10:31
600-85318-11	2013-MB-4 (0.83-1.33)	Solid	01/08/14 15:15	01/10/14 10:31
600-85318-14	MW-27D (0.5-2)	Solid	01/08/14 15:45	01/10/14 10:31
600-85318-16	MW-27C (0-2)	Solid	01/08/14 16:20	01/10/14 10:31
600-85318-17	MW-41 (0-0.5)	Solid	01/08/14 13:40	01/10/14 10:31
600-85318-18	MW-41 (0.5-2)	Solid	01/08/14 13:45	01/10/14 10:31
600-85318-19	MW-42 (0-0.5)	Solid	01/08/14 15:40	01/10/14 10:31
600-85318-20	MW-42 (0.5-2)	Solid	01/08/14 15:45	01/10/14 10:31
600-85318-21	DUP-6	Solid	01/08/14 00:00	01/10/14 10:31
600-85318-22	FIELD BLANK	Water	01/08/14 17:19	01/10/14 10:31
600-85318-23	RINSE BLANK-CME	Water	01/09/14 08:50	01/10/14 10:31
600-85318-24	MW-27B (0-2)	Solid	01/09/14 08:55	01/10/14 10:31
600-85318-26	MW-27A (0-2)	Solid	01/09/14 09:25	01/10/14 10:31
600-85318-28	2013-NDA-1A(2-4)	Solid	01/09/14 10:15	01/10/14 10:31
600-85318-30	D11A (0-0.5)	Solid	01/09/14 10:35	01/10/14 10:31
600-85318-31	D12A (0-0.5)	Solid	01/09/14 10:50	01/10/14 10:31
600-85318-32	D13A (0-0.5)	Solid	01/09/14 11:04	01/10/14 10:31
600-85318-33	2013-C2L-03-(0-0.5)	Solid	01/09/14 11:26	01/10/14 10:31
600-85318-36	2013-BSA-2A(0-2)	Solid	01/09/14 12:50	01/10/14 10:31
600-85318-37	2013-AD-04 (0-0.5)	Solid	01/09/14 13:26	01/10/14 10:31
600-85318-40	RINSE BLANK aeo	Water	01/09/14 08:30	01/10/14 10:31
600-85318-41	TRIP BLANK	Water	01/09/14 00:00	01/10/14 10:31

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-01 (0.25-2)**

**Date Collected: 01/08/14 10:20**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-1**

**Matrix: Solid**

**Percent Solids: 78.5**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.0111	J	0.0127	0.00212	mg/Kg	☼		01/14/14 15:28	1
Benzene	0.000803	U	0.00637	0.000803	mg/Kg	☼		01/14/14 15:28	1
Chlorobromomethane	0.00227	U	0.00637	0.00227	mg/Kg	☼		01/14/14 15:28	1
Bromoform	0.00175	U	0.00637	0.00175	mg/Kg	☼		01/14/14 15:28	1
Bromomethane	0.00106	U	0.0127	0.00106	mg/Kg	☼		01/14/14 15:28	1
2-Butanone (MEK)	0.00242	U	0.0127	0.00242	mg/Kg	☼		01/14/14 15:28	1
Carbon disulfide	0.000701	U	0.0127	0.000701	mg/Kg	☼		01/14/14 15:28	1
Carbon tetrachloride	0.00144	U	0.00637	0.00144	mg/Kg	☼		01/14/14 15:28	1
Dibromochloromethane	0.00120	U	0.00637	0.00120	mg/Kg	☼		01/14/14 15:28	1
Chlorobenzene	0.00122	U	0.00637	0.00122	mg/Kg	☼		01/14/14 15:28	1
Chloroethane	0.00178	U	0.0127	0.00178	mg/Kg	☼		01/14/14 15:28	1
Chloroform	0.000841	U	0.00637	0.000841	mg/Kg	☼		01/14/14 15:28	1
Chloromethane	0.00212	U	0.0127	0.00212	mg/Kg	☼		01/14/14 15:28	1
1,1-Dichloroethane	0.00111	U	0.00637	0.00111	mg/Kg	☼		01/14/14 15:28	1
1,2-Dichloroethane	0.00115	U	0.00637	0.00115	mg/Kg	☼		01/14/14 15:28	1
1,1-Dichloroethene	0.00155	U	0.00637	0.00155	mg/Kg	☼		01/14/14 15:28	1
cis-1,2-Dichloroethene	0.00106	U	0.00637	0.00106	mg/Kg	☼		01/14/14 15:28	1
trans-1,2-Dichloroethene	0.00145	U	0.00637	0.00145	mg/Kg	☼		01/14/14 15:28	1
1,2-Dichloropropane	0.000905	U	0.00637	0.000905	mg/Kg	☼		01/14/14 15:28	1
cis-1,3-Dichloropropene	0.000688	U	0.00637	0.000688	mg/Kg	☼		01/14/14 15:28	1
trans-1,3-Dichloropropene	0.000739	U	0.00637	0.000739	mg/Kg	☼		01/14/14 15:28	1
Ethylbenzene	0.00130	U	0.00637	0.00130	mg/Kg	☼		01/14/14 15:28	1
2-Hexanone	0.00129	U	0.0127	0.00129	mg/Kg	☼		01/14/14 15:28	1
Methylene Chloride	0.00279	U	0.0127	0.00279	mg/Kg	☼		01/14/14 15:28	1
4-Methyl-2-pentanone (MIBK)	0.00187	U	0.0127	0.00187	mg/Kg	☼		01/14/14 15:28	1
Styrene	0.000905	U	0.00637	0.000905	mg/Kg	☼		01/14/14 15:28	1
1,1,2,2-Tetrachloroethane	0.00111	U	0.00637	0.00111	mg/Kg	☼		01/14/14 15:28	1
Tetrachloroethene	0.000905	U	0.00637	0.000905	mg/Kg	☼		01/14/14 15:28	1
Toluene	0.00176	U	0.00637	0.00176	mg/Kg	☼		01/14/14 15:28	1
1,1,1-Trichloroethane	0.000943	U	0.00637	0.000943	mg/Kg	☼		01/14/14 15:28	1
1,1,2-Trichloroethane	0.000930	U	0.00637	0.000930	mg/Kg	☼		01/14/14 15:28	1
Trichloroethene	0.00178	U	0.00637	0.00178	mg/Kg	☼		01/14/14 15:28	1
Vinyl acetate	0.00119	U	0.00637	0.00119	mg/Kg	☼		01/14/14 15:28	1
Vinyl chloride	0.00115	U	0.0127	0.00115	mg/Kg	☼		01/14/14 15:28	1
o-Xylene	0.00144	U	0.00637	0.00144	mg/Kg	☼		01/14/14 15:28	1
m-Xylene & p-Xylene	0.00194	U	0.0127	0.00194	mg/Kg	☼		01/14/14 15:28	1
Xylenes, Total	0.00144	U	0.00637	0.00144	mg/Kg	☼		01/14/14 15:28	1
Bromodichloromethane	0.000841	U	0.00637	0.000841	mg/Kg	☼		01/14/14 15:28	1
1,2-Dichloroethene, Total	0.00242	U	0.0127	0.00242	mg/Kg	☼		01/14/14 15:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	76		50 - 130		01/14/14 15:28	1
Dibromofluoromethane	81		68 - 140		01/14/14 15:28	1
4-Bromofluorobenzene	104		57 - 140		01/14/14 15:28	1
1,2-Dichloroethane-d4 (Surr)	85		61 - 130		01/14/14 15:28	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0731	U	0.846	0.0731	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Acenaphthylene	0.0508	U	0.846	0.0508	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-01 (0.25-2)**

**Lab Sample ID: 600-85318-1**

**Date Collected: 01/08/14 10:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.5**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.0650	U	0.846	0.0650	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzidine	0.458	U	4.23	0.458	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzo[a]anthracene	0.0701	U	0.846	0.0701	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzo[a]pyrene	0.0818	U	0.846	0.0818	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzo[b]fluoranthene	0.0873	U	0.846	0.0873	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzo[g,h,i]perylene	0.257	U	0.846	0.257	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzo[k]fluoranthene	0.0757	U	0.846	0.0757	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Benzyl alcohol	0.296	U	0.846	0.296	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Bis(2-chloroethoxy)methane	0.0721	U	0.846	0.0721	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Bis(2-chloroethyl)ether	0.0838	U	0.846	0.0838	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
bis (2-Chloroisopropyl) ether	0.449	U	0.846	0.449	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Bis(2-ethylhexyl) phthalate	0.273	U	3.39	0.273	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Bromophenyl phenyl ether	0.144	U	0.846	0.144	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Butyl benzyl phthalate	0.314	U	3.39	0.314	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Carbazole	0.158	U	0.846	0.158	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Chloroaniline	0.296	U	0.846	0.296	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Chloro-3-methylphenol	0.791	U	0.846	0.791	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2-Chloronaphthalene	0.0614	U	0.846	0.0614	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2-Chlorophenol	0.100	U	0.846	0.100	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Chlorophenyl phenyl ether	0.0914	U	0.846	0.0914	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Chrysene	0.0518	U	0.846	0.0518	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Dibenz(a,h)anthracene	0.184	U	0.846	0.184	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Dibenzofuran	0.0904	U	0.846	0.0904	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
1,2-Dichlorobenzene	0.153	U	0.846	0.153	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
1,3-Dichlorobenzene	0.0782	U	0.846	0.0782	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
1,4-Dichlorobenzene	0.114	U	0.846	0.114	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
3,3'-Dichlorobenzidine	0.516	U	0.846	0.516	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4-Dichlorophenol	0.197	U	0.846	0.197	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Diethyl phthalate	0.428	U	3.39	0.428	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4-Dimethylphenol	0.436	U	0.846	0.436	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Dimethyl phthalate	0.248	U	3.39	0.248	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Di-n-butyl phthalate	0.132	U	3.39	0.132	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4,6-Dinitro-2-methylphenol	0.253	U	0.846	0.253	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4-Dinitrophenol	0.240	U	5.08	0.240	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4-Dinitrotoluene	0.183	U	0.846	0.183	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,6-Dinitrotoluene	0.150	U	0.846	0.150	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Di-n-octyl phthalate	0.0965	U	3.39	0.0965	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Fluoranthene	0.158	U	0.846	0.158	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Fluorene	0.120	U	0.846	0.120	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Hexachlorobenzene	0.0772	U	0.846	0.0772	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Hexachlorobutadiene	0.0975	U	0.846	0.0975	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Hexachlorocyclopentadiene	0.234	U	0.846	0.234	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Hexachloroethane	0.117	U	0.846	0.117	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Indeno[1,2,3-cd]pyrene	0.178	U	0.846	0.178	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Isophorone	0.0508	U	0.846	0.0508	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2-Methylnaphthalene	0.139	U	0.846	0.139	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2-Methylphenol	0.164	U	0.846	0.164	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
<b>3 &amp; 4 Methylphenol</b>	<b>0.355</b>	<b>J</b>	1.69	0.142	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Naphthalene	0.0685	U	0.846	0.0685	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-01 (0.25-2)**

**Lab Sample ID: 600-85318-1**

**Date Collected: 01/08/14 10:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.5**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.248	U	0.846	0.248	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
3-Nitroaniline	0.363	U	0.846	0.363	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Nitroaniline	0.566	U	0.846	0.566	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Nitrobenzene	0.150	U	0.846	0.150	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2-Nitrophenol	0.198	U	0.846	0.198	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
4-Nitrophenol	0.258	U	0.846	0.258	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
N-Nitrosodimethylamine	0.213	U	0.846	0.213	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
N-Nitrosodi-n-propylamine	0.113	U	0.846	0.113	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
N-Nitrosodiphenylamine	0.0960	U	0.846	0.0960	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Pentachlorophenol	0.203	U	8.48	0.203	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Phenanthrene	0.251	U	0.846	0.251	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
<b>Phenol</b>	<b>0.726</b>	<b>J</b>	0.846	0.215	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
Pyrene	0.0929	U	0.846	0.0929	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
1,2,4-Trichlorobenzene	0.107	U	0.846	0.107	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4,5-Trichlorophenol	0.508	U	0.846	0.508	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20
2,4,6-Trichlorophenol	0.136	U	0.846	0.136	mg/Kg	☼	01/17/14 13:18	01/22/14 21:55	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	0	X	38 - 127	01/17/14 13:18	01/22/14 21:55	20
2-Fluorophenol	0	X	25 - 132	01/17/14 13:18	01/22/14 21:55	20
Nitrobenzene-d5	0	X	10 - 155	01/17/14 13:18	01/22/14 21:55	20
Phenol-d5 (Surr)	0	X	27 - 123	01/17/14 13:18	01/22/14 21:55	20
Terphenyl-d14	0	X	53 - 134	01/17/14 13:18	01/22/14 21:55	20
2,4,6-Tribromophenol	0	X	10 - 148	01/17/14 13:18	01/22/14 21:55	20

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.83	U	12.7	4.83	mg/Kg	☼	01/14/14 12:54	01/14/14 16:07	1
>C12-C28	5.16	U	12.7	5.16	mg/Kg	☼	01/14/14 12:54	01/14/14 16:07	1
>C28-C35	5.16	U	12.7	5.16	mg/Kg	☼	01/14/14 12:54	01/14/14 16:07	1
C6-C35	9.51	U	12.7	9.51	mg/Kg	☼	01/14/14 12:54	01/14/14 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	88		70 - 130	01/14/14 12:54	01/14/14 16:07	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Percent Moisture</b>	<b>22</b>		1.0	1.0	%			01/13/14 09:59	1
<b>Percent Solids</b>	<b>78</b>		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: 2013-FFTA-03 (18-19)**

**Lab Sample ID: 600-85318-3**

**Date Collected: 01/08/14 10:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 93.4**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.0290</b>		0.0107	0.00178	mg/Kg	☼		01/15/14 20:16	1
Benzene	0.000675	U	0.00536	0.000675	mg/Kg	☼		01/15/14 20:16	1
Chlorobromomethane	0.00191	U	0.00536	0.00191	mg/Kg	☼		01/15/14 20:16	1
Bromoform	0.00147	U	0.00536	0.00147	mg/Kg	☼		01/15/14 20:16	1
Bromomethane	0.000889	U	0.0107	0.000889	mg/Kg	☼		01/15/14 20:16	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-03 (18-19)**

**Lab Sample ID: 600-85318-3**

**Date Collected: 01/08/14 10:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 93.4**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	0.00204	U	0.0107	0.00204	mg/Kg	☼		01/15/14 20:16	1
Carbon disulfide	0.000589	U	0.0107	0.000589	mg/Kg	☼		01/15/14 20:16	1
Carbon tetrachloride	0.00121	U	0.00536	0.00121	mg/Kg	☼		01/15/14 20:16	1
Dibromochloromethane	0.00101	U	0.00536	0.00101	mg/Kg	☼		01/15/14 20:16	1
Chlorobenzene	0.00103	U	0.00536	0.00103	mg/Kg	☼		01/15/14 20:16	1
Chloroethane	0.00150	U	0.0107	0.00150	mg/Kg	☼		01/15/14 20:16	1
Chloroform	0.000707	U	0.00536	0.000707	mg/Kg	☼		01/15/14 20:16	1
Chloromethane	0.00178	U	0.0107	0.00178	mg/Kg	☼		01/15/14 20:16	1
1,1-Dichloroethane	0.000932	U	0.00536	0.000932	mg/Kg	☼		01/15/14 20:16	1
1,2-Dichloroethane	0.000964	U	0.00536	0.000964	mg/Kg	☼		01/15/14 20:16	1
1,1-Dichloroethene	0.00131	U	0.00536	0.00131	mg/Kg	☼		01/15/14 20:16	1
cis-1,2-Dichloroethene	0.000889	U	0.00536	0.000889	mg/Kg	☼		01/15/14 20:16	1
trans-1,2-Dichloroethene	0.00122	U	0.00536	0.00122	mg/Kg	☼		01/15/14 20:16	1
1,2-Dichloropropane	0.000761	U	0.00536	0.000761	mg/Kg	☼		01/15/14 20:16	1
cis-1,3-Dichloropropene	0.000578	U	0.00536	0.000578	mg/Kg	☼		01/15/14 20:16	1
trans-1,3-Dichloropropene	0.000621	U	0.00536	0.000621	mg/Kg	☼		01/15/14 20:16	1
Ethylbenzene	0.00109	U	0.00536	0.00109	mg/Kg	☼		01/15/14 20:16	1
2-Hexanone	0.00108	U	0.0107	0.00108	mg/Kg	☼		01/15/14 20:16	1
<b>Methylene Chloride</b>	<b>0.00366</b>	<b>J</b>	0.0107	0.00235	mg/Kg	☼		01/15/14 20:16	1
4-Methyl-2-pentanone (MIBK)	0.00157	U	0.0107	0.00157	mg/Kg	☼		01/15/14 20:16	1
Styrene	0.000761	U	0.00536	0.000761	mg/Kg	☼		01/15/14 20:16	1
1,1,2,2-Tetrachloroethane	0.000932	U	0.00536	0.000932	mg/Kg	☼		01/15/14 20:16	1
Tetrachloroethene	0.000761	U	0.00536	0.000761	mg/Kg	☼		01/15/14 20:16	1
Toluene	0.00148	U	0.00536	0.00148	mg/Kg	☼		01/15/14 20:16	1
1,1,1-Trichloroethane	0.000793	U	0.00536	0.000793	mg/Kg	☼		01/15/14 20:16	1
1,1,2-Trichloroethane	0.000782	U	0.00536	0.000782	mg/Kg	☼		01/15/14 20:16	1
Trichloroethene	0.00150	U	0.00536	0.00150	mg/Kg	☼		01/15/14 20:16	1
Vinyl acetate	0.000996	U	0.00536	0.000996	mg/Kg	☼		01/15/14 20:16	1
Vinyl chloride	0.000964	U	0.0107	0.000964	mg/Kg	☼		01/15/14 20:16	1
o-Xylene	0.00121	U	0.00536	0.00121	mg/Kg	☼		01/15/14 20:16	1
m-Xylene & p-Xylene	0.00163	U	0.0107	0.00163	mg/Kg	☼		01/15/14 20:16	1
Xylenes, Total	0.00121	U	0.00536	0.00121	mg/Kg	☼		01/15/14 20:16	1
Bromodichloromethane	0.000707	U	0.00536	0.000707	mg/Kg	☼		01/15/14 20:16	1
1,2-Dichloroethene, Total	0.00204	U	0.0107	0.00204	mg/Kg	☼		01/15/14 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		50 - 130		01/15/14 20:16	1
Dibromofluoromethane	85		68 - 140		01/15/14 20:16	1
4-Bromofluorobenzene	132		57 - 140		01/15/14 20:16	1
1,2-Dichloroethane-d4 (Surr)	90		61 - 130		01/15/14 20:16	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.00308	U	0.0356	0.00308	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Acenaphthylene	0.00214	U	0.0356	0.00214	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Anthracene	0.00274	U	0.0356	0.00274	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzidine	0.0193	U	0.178	0.0193	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzo[a]anthracene	0.00295	U	0.0356	0.00295	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzo[a]pyrene	0.00344	U	0.0356	0.00344	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzo[b]fluoranthene	0.00368	U	0.0356	0.00368	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-03 (18-19)**

**Lab Sample ID: 600-85318-3**

**Date Collected: 01/08/14 10:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 93.4**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MLQ (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	0.0108	U	0.0356	0.0108	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzo[k]fluoranthene	0.00319	U	0.0356	0.00319	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Benzyl alcohol	0.0125	U	0.0356	0.0125	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Bis(2-chloroethoxy)methane	0.00304	U	0.0356	0.00304	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Bis(2-chloroethyl)ether	0.00353	U	0.0356	0.00353	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
bis (2-Chloroisopropyl) ether	0.0189	U	0.0356	0.0189	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.0326</b>	<b>J</b>	0.143	0.0115	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4-Bromophenyl phenyl ether	0.00607	U	0.0356	0.00607	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Butyl benzyl phthalate	0.0132	U	0.143	0.0132	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Carbazole	0.00667	U	0.0356	0.00667	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4-Chloroaniline	0.0124	U	0.0356	0.0124	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4-Chloro-3-methylphenol	0.0333	U	0.0356	0.0333	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2-Chloronaphthalene	0.00259	U	0.0356	0.00259	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2-Chlorophenol	0.00421	U	0.0356	0.00421	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4-Chlorophenyl phenyl ether	0.00385	U	0.0356	0.00385	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Chrysene	0.00218	U	0.0356	0.00218	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Dibenz(a,h)anthracene	0.00776	U	0.0356	0.00776	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Dibenzofuran	0.00381	U	0.0356	0.00381	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
1,2-Dichlorobenzene	0.00646	U	0.0356	0.00646	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
1,3-Dichlorobenzene	0.00329	U	0.0356	0.00329	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
1,4-Dichlorobenzene	0.00481	U	0.0356	0.00481	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
3,3'-Dichlorobenzidine	0.0217	U	0.0356	0.0217	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4-Dichlorophenol	0.00827	U	0.0356	0.00827	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Diethyl phthalate</b>	<b>0.262</b>	<b>b</b>	0.143	0.0180	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4-Dimethylphenol	0.0183	U	0.0356	0.0183	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Dimethyl phthalate	0.0105	U	0.143	0.0105	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Di-n-butyl phthalate</b>	<b>0.0914</b>	<b>J b</b>	0.143	0.00554	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4,6-Dinitro-2-methylphenol	0.0106	U	0.0356	0.0106	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4-Dinitrophenol	0.0101	U	0.214	0.0101	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4-Dinitrotoluene	0.00772	U	0.0356	0.00772	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,6-Dinitrotoluene	0.00631	U	0.0356	0.00631	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Di-n-octyl phthalate	0.00406	U	0.143	0.00406	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Fluoranthene	0.00665	U	0.0356	0.00665	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Fluorene	0.00505	U	0.0356	0.00505	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Hexachlorobenzene	0.00325	U	0.0356	0.00325	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Hexachlorobutadiene	0.00411	U	0.0356	0.00411	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Hexachlorocyclopentadiene	0.00986	U	0.0356	0.00986	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Hexachloroethane	0.00494	U	0.0356	0.00494	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Indeno[1,2,3-cd]pyrene	0.00748	U	0.0356	0.00748	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Isophorone</b>	<b>0.153</b>		0.0356	0.00214	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>2-Methylnaphthalene</b>	<b>0.0311</b>	<b>J</b>	0.0356	0.00586	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2-Methylphenol	0.00691	U	0.0356	0.00691	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>3 &amp; 4 Methylphenol</b>	<b>0.572</b>		0.0713	0.00597	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Naphthalene</b>	<b>0.0150</b>	<b>J</b>	0.0356	0.00289	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2-Nitroaniline	0.0105	U	0.0356	0.0105	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
3-Nitroaniline	0.0153	U	0.0356	0.0153	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
4-Nitroaniline	0.0238	U	0.0356	0.0238	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Nitrobenzene	0.00633	U	0.0356	0.00633	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2-Nitrophenol	0.00832	U	0.0356	0.00832	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-03 (18-19)**

**Lab Sample ID: 600-85318-3**

**Date Collected: 01/08/14 10:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 93.4**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	0.0109	U	0.0356	0.0109	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
N-Nitrosodimethylamine	0.00896	U	0.0356	0.00896	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
N-Nitrosodi-n-propylamine	0.00475	U	0.0356	0.00475	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
N-Nitrosodiphenylamine	0.00404	U	0.0356	0.00404	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Pentachlorophenol	0.00855	U	0.357	0.00855	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Phenanthrene</b>	<b>0.0116</b>	<b>J</b>	0.0356	0.0106	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
<b>Phenol</b>	<b>0.247</b>		0.0356	0.00907	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
Pyrene	0.00391	U	0.0356	0.00391	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
1,2,4-Trichlorobenzene	0.00449	U	0.0356	0.00449	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4,5-Trichlorophenol	0.0214	U	0.0356	0.0214	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1
2,4,6-Trichlorophenol	0.00573	U	0.0356	0.00573	mg/Kg	☼	01/17/14 13:18	01/21/14 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	108		38 - 127	01/17/14 13:18	01/21/14 02:32	1
2-Fluorophenol	51		25 - 132	01/17/14 13:18	01/21/14 02:32	1
Nitrobenzene-d5	82		10 - 155	01/17/14 13:18	01/21/14 02:32	1
Phenol-d5 (Surr)	6	X	27 - 123	01/17/14 13:18	01/21/14 02:32	1
Terphenyl-d14	117		53 - 134	01/17/14 13:18	01/21/14 02:32	1
2,4,6-Tribromophenol	34		10 - 148	01/17/14 13:18	01/21/14 02:32	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.04	U	10.6	4.04	mg/Kg	☼	01/14/14 12:54	01/14/14 16:41	1
>C12-C28	4.32	U	10.6	4.32	mg/Kg	☼	01/14/14 12:54	01/14/14 16:41	1
>C28-C35	4.32	U	10.6	4.32	mg/Kg	☼	01/14/14 12:54	01/14/14 16:41	1
C6-C35	7.96	U	10.6	7.96	mg/Kg	☼	01/14/14 12:54	01/14/14 16:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	96		70 - 130	01/14/14 12:54	01/14/14 16:41	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Percent Moisture</b>	<b>6.6</b>		1.0	1.0	%	-		01/13/14 09:59	1
<b>Percent Solids</b>	<b>93</b>		1.0	1.0	%	-		01/13/14 09:59	1

**Client Sample ID: 2013-MB-3 (0.75-1.25)**

**Lab Sample ID: 600-85318-4**

**Date Collected: 01/08/14 12:18**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 77.2**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.306</b>		0.0130	0.00215	mg/Kg	☼		01/15/14 20:41	1
Benzene	0.000816	U	0.00648	0.000816	mg/Kg	☼		01/15/14 20:41	1
Chlorobromomethane	0.00231	U	0.00648	0.00231	mg/Kg	☼		01/15/14 20:41	1
Bromoform	0.00178	U	0.00648	0.00178	mg/Kg	☼		01/15/14 20:41	1
Bromomethane	0.00108	U	0.0130	0.00108	mg/Kg	☼		01/15/14 20:41	1
<b>2-Butanone (MEK)</b>	<b>0.0392</b>		0.0130	0.00246	mg/Kg	☼		01/15/14 20:41	1
<b>Carbon disulfide</b>	<b>0.00168</b>	<b>J</b>	0.0130	0.000713	mg/Kg	☼		01/15/14 20:41	1
Carbon tetrachloride	0.00146	U	0.00648	0.00146	mg/Kg	☼		01/15/14 20:41	1
Dibromochloromethane	0.00122	U	0.00648	0.00122	mg/Kg	☼		01/15/14 20:41	1
Chlorobenzene	0.00124	U	0.00648	0.00124	mg/Kg	☼		01/15/14 20:41	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-3 (0.75-1.25)**

**Lab Sample ID: 600-85318-4**

**Date Collected: 01/08/14 12:18**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 77.2**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.00181	U	0.0130	0.00181	mg/Kg	☼		01/15/14 20:41	1
Chloroform	0.000855	U	0.00648	0.000855	mg/Kg	☼		01/15/14 20:41	1
Chloromethane	0.00215	U	0.0130	0.00215	mg/Kg	☼		01/15/14 20:41	1
1,1-Dichloroethane	0.00113	U	0.00648	0.00113	mg/Kg	☼		01/15/14 20:41	1
1,2-Dichloroethane	0.00117	U	0.00648	0.00117	mg/Kg	☼		01/15/14 20:41	1
1,1-Dichloroethene	0.00158	U	0.00648	0.00158	mg/Kg	☼		01/15/14 20:41	1
cis-1,2-Dichloroethene	0.00108	U	0.00648	0.00108	mg/Kg	☼		01/15/14 20:41	1
trans-1,2-Dichloroethene	0.00148	U	0.00648	0.00148	mg/Kg	☼		01/15/14 20:41	1
1,2-Dichloropropane	0.000920	U	0.00648	0.000920	mg/Kg	☼		01/15/14 20:41	1
cis-1,3-Dichloropropene	0.000700	U	0.00648	0.000700	mg/Kg	☼		01/15/14 20:41	1
trans-1,3-Dichloropropene	0.000752	U	0.00648	0.000752	mg/Kg	☼		01/15/14 20:41	1
Ethylbenzene	0.00132	U	0.00648	0.00132	mg/Kg	☼		01/15/14 20:41	1
2-Hexanone	0.00131	U	0.0130	0.00131	mg/Kg	☼		01/15/14 20:41	1
Methylene Chloride	0.00284	U	0.0130	0.00284	mg/Kg	☼		01/15/14 20:41	1
4-Methyl-2-pentanone (MIBK)	0.00191	U	0.0130	0.00191	mg/Kg	☼		01/15/14 20:41	1
Styrene	0.000920	U	0.00648	0.000920	mg/Kg	☼		01/15/14 20:41	1
1,1,2,2-Tetrachloroethane	0.00113	U	0.00648	0.00113	mg/Kg	☼		01/15/14 20:41	1
Tetrachloroethene	0.000920	U	0.00648	0.000920	mg/Kg	☼		01/15/14 20:41	1
Toluene	0.00179	U	0.00648	0.00179	mg/Kg	☼		01/15/14 20:41	1
1,1,1-Trichloroethane	0.000959	U	0.00648	0.000959	mg/Kg	☼		01/15/14 20:41	1
1,1,2-Trichloroethane	0.000946	U	0.00648	0.000946	mg/Kg	☼		01/15/14 20:41	1
Trichloroethene	0.00181	U	0.00648	0.00181	mg/Kg	☼		01/15/14 20:41	1
Vinyl acetate	0.00121	U	0.00648	0.00121	mg/Kg	☼		01/15/14 20:41	1
Vinyl chloride	0.00117	U	0.0130	0.00117	mg/Kg	☼		01/15/14 20:41	1
o-Xylene	0.00146	U	0.00648	0.00146	mg/Kg	☼		01/15/14 20:41	1
m-Xylene & p-Xylene	0.00197	U	0.0130	0.00197	mg/Kg	☼		01/15/14 20:41	1
Xylenes, Total	0.00146	U	0.00648	0.00146	mg/Kg	☼		01/15/14 20:41	1
Bromodichloromethane	0.000855	U	0.00648	0.000855	mg/Kg	☼		01/15/14 20:41	1
1,2-Dichloroethene, Total	0.00246	U	0.0130	0.00246	mg/Kg	☼		01/15/14 20:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		50 - 130					01/15/14 20:41	1
Dibromofluoromethane	93		68 - 140					01/15/14 20:41	1
4-Bromofluorobenzene	133		57 - 140					01/15/14 20:41	1
1,2-Dichloroethane-d4 (Surr)	95		61 - 130					01/15/14 20:41	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	2.19		0.306	0.0313	mg/Kg	☼	01/13/14 14:19	01/14/14 08:28	1
Lead	732		0.611	0.128	mg/Kg	☼	01/13/14 14:19	01/14/14 08:28	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (0.5-5)**

**Lab Sample ID: 600-85318-7**

**Date Collected: 01/08/14 13:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.7**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.127</b>		0.0130	0.00217	mg/Kg	☼		01/15/14 21:06	1
Benzene	0.000822	U	0.00652	0.000822	mg/Kg	☼		01/15/14 21:06	1
Chlorobromomethane	0.00232	U	0.00652	0.00232	mg/Kg	☼		01/15/14 21:06	1
Bromoform	0.00179	U	0.00652	0.00179	mg/Kg	☼		01/15/14 21:06	1
Bromomethane	0.00108	U	0.0130	0.00108	mg/Kg	☼		01/15/14 21:06	1
<b>2-Butanone (MEK)</b>	<b>0.0135</b>		0.0130	0.00248	mg/Kg	☼		01/15/14 21:06	1
<b>Carbon disulfide</b>	<b>0.00180</b>	<b>J</b>	0.0130	0.000717	mg/Kg	☼		01/15/14 21:06	1
Carbon tetrachloride	0.00147	U	0.00652	0.00147	mg/Kg	☼		01/15/14 21:06	1
Dibromochloromethane	0.00123	U	0.00652	0.00123	mg/Kg	☼		01/15/14 21:06	1
Chlorobenzene	0.00125	U	0.00652	0.00125	mg/Kg	☼		01/15/14 21:06	1
Chloroethane	0.00183	U	0.0130	0.00183	mg/Kg	☼		01/15/14 21:06	1
Chloroform	0.000861	U	0.00652	0.000861	mg/Kg	☼		01/15/14 21:06	1
Chloromethane	0.00217	U	0.0130	0.00217	mg/Kg	☼		01/15/14 21:06	1
1,1-Dichloroethane	0.00113	U	0.00652	0.00113	mg/Kg	☼		01/15/14 21:06	1
1,2-Dichloroethane	0.00117	U	0.00652	0.00117	mg/Kg	☼		01/15/14 21:06	1
1,1-Dichloroethene	0.00159	U	0.00652	0.00159	mg/Kg	☼		01/15/14 21:06	1
cis-1,2-Dichloroethene	0.00108	U	0.00652	0.00108	mg/Kg	☼		01/15/14 21:06	1
trans-1,2-Dichloroethene	0.00149	U	0.00652	0.00149	mg/Kg	☼		01/15/14 21:06	1
1,2-Dichloropropane	0.000926	U	0.00652	0.000926	mg/Kg	☼		01/15/14 21:06	1
cis-1,3-Dichloropropene	0.000704	U	0.00652	0.000704	mg/Kg	☼		01/15/14 21:06	1
trans-1,3-Dichloropropene	0.000756	U	0.00652	0.000756	mg/Kg	☼		01/15/14 21:06	1
Ethylbenzene	0.00133	U	0.00652	0.00133	mg/Kg	☼		01/15/14 21:06	1
2-Hexanone	0.00132	U	0.0130	0.00132	mg/Kg	☼		01/15/14 21:06	1
<b>Methylene Chloride</b>	<b>0.00505</b>	<b>J</b>	0.0130	0.00286	mg/Kg	☼		01/15/14 21:06	1
4-Methyl-2-pentanone (MIBK)	0.00192	U	0.0130	0.00192	mg/Kg	☼		01/15/14 21:06	1
Styrene	0.000926	U	0.00652	0.000926	mg/Kg	☼		01/15/14 21:06	1
1,1,2,2-Tetrachloroethane	0.00113	U	0.00652	0.00113	mg/Kg	☼		01/15/14 21:06	1
Tetrachloroethene	0.000926	U	0.00652	0.000926	mg/Kg	☼		01/15/14 21:06	1
Toluene	0.00180	U	0.00652	0.00180	mg/Kg	☼		01/15/14 21:06	1
1,1,1-Trichloroethane	0.000965	U	0.00652	0.000965	mg/Kg	☼		01/15/14 21:06	1
1,1,2-Trichloroethane	0.000952	U	0.00652	0.000952	mg/Kg	☼		01/15/14 21:06	1
Trichloroethene	0.00183	U	0.00652	0.00183	mg/Kg	☼		01/15/14 21:06	1
Vinyl acetate	0.00121	U	0.00652	0.00121	mg/Kg	☼		01/15/14 21:06	1
Vinyl chloride	0.00117	U	0.0130	0.00117	mg/Kg	☼		01/15/14 21:06	1
o-Xylene	0.00147	U	0.00652	0.00147	mg/Kg	☼		01/15/14 21:06	1
m-Xylene & p-Xylene	0.00198	U	0.0130	0.00198	mg/Kg	☼		01/15/14 21:06	1
Xylenes, Total	0.00147	U	0.00652	0.00147	mg/Kg	☼		01/15/14 21:06	1
Bromodichloromethane	0.000861	U	0.00652	0.000861	mg/Kg	☼		01/15/14 21:06	1
1,2-Dichloroethene, Total	0.00248	U	0.0130	0.00248	mg/Kg	☼		01/15/14 21:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	91		50 - 130		01/15/14 21:06	1
<i>Dibromofluoromethane</i>	87		68 - 140		01/15/14 21:06	1
<i>4-Bromofluorobenzene</i>	138		57 - 140		01/15/14 21:06	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	90		61 - 130		01/15/14 21:06	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.00374	U	0.0433	0.00374	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Acenaphthylene	0.00259	U	0.0433	0.00259	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (0.5-5)**

**Lab Sample ID: 600-85318-7**

**Date Collected: 01/08/14 13:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.7**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MLQ (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.00332	U	0.0433	0.00332	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzidine	0.0234	U	0.216	0.0234	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Benzo[a]anthracene</b>	<b>0.00823</b>	<b>J</b>	0.0433	0.00358	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzo[a]pyrene	0.00418	U	0.0433	0.00418	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzo[b]fluoranthene	0.00446	U	0.0433	0.00446	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzo[g,h,i]perylene	0.0132	U	0.0433	0.0132	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzo[k]fluoranthene	0.00387	U	0.0433	0.00387	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Benzyl alcohol	0.0151	U	0.0433	0.0151	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Bis(2-chloroethoxy)methane	0.00368	U	0.0433	0.00368	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Bis(2-chloroethyl)ether	0.00428	U	0.0433	0.00428	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
bis (2-Chloroisopropyl) ether	0.0229	U	0.0433	0.0229	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.0788</b>	<b>J</b>	0.173	0.0139	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Bromophenyl phenyl ether	0.00737	U	0.0433	0.00737	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Butyl benzyl phthalate	0.0161	U	0.173	0.0161	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Carbazole</b>	<b>0.0224</b>	<b>J</b>	0.0433	0.00810	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Chloroaniline	0.0151	U	0.0433	0.0151	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Chloro-3-methylphenol	0.0404	U	0.0433	0.0404	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2-Chloronaphthalene	0.00314	U	0.0433	0.00314	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2-Chlorophenol	0.00511	U	0.0433	0.00511	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Chlorophenyl phenyl ether	0.00467	U	0.0433	0.00467	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Chrysene</b>	<b>0.0183</b>	<b>J</b>	0.0433	0.00265	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Dibenz(a,h)anthracene	0.00942	U	0.0433	0.00942	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Dibenzofuran	0.00462	U	0.0433	0.00462	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
1,2-Dichlorobenzene	0.00784	U	0.0433	0.00784	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
1,3-Dichlorobenzene	0.00400	U	0.0433	0.00400	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
1,4-Dichlorobenzene	0.00584	U	0.0433	0.00584	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
3,3'-Dichlorobenzidine	0.0264	U	0.0433	0.0264	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4-Dichlorophenol	0.0100	U	0.0433	0.0100	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Diethyl phthalate</b>	<b>0.263</b>	<b>b</b>	0.173	0.0219	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4-Dimethylphenol	0.0223	U	0.0433	0.0223	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Dimethyl phthalate	0.0127	U	0.173	0.0127	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Di-n-butyl phthalate</b>	<b>0.0770</b>	<b>J b</b>	0.173	0.00672	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4,6-Dinitro-2-methylphenol	0.0129	U	0.0433	0.0129	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4-Dinitrophenol	0.0122	U	0.259	0.0122	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4-Dinitrotoluene	0.00937	U	0.0433	0.00937	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,6-Dinitrotoluene	0.00765	U	0.0433	0.00765	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Di-n-octyl phthalate	0.00493	U	0.173	0.00493	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Fluoranthene</b>	<b>0.0184</b>	<b>J</b>	0.0433	0.00807	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Fluorene	0.00612	U	0.0433	0.00612	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Hexachlorobenzene	0.00394	U	0.0433	0.00394	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Hexachlorobutadiene	0.00498	U	0.0433	0.00498	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Hexachlorocyclopentadiene	0.0120	U	0.0433	0.0120	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Hexachloroethane	0.00599	U	0.0433	0.00599	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Indeno[1,2,3-cd]pyrene	0.00908	U	0.0433	0.00908	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Isophorone	0.00259	U	0.0433	0.00259	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>2-Methylnaphthalene</b>	<b>0.0887</b>		0.0433	0.00711	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2-Methylphenol	0.00838	U	0.0433	0.00838	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>3 &amp; 4 Methylphenol</b>	<b>0.0929</b>		0.0865	0.00724	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
<b>Naphthalene</b>	<b>0.0746</b>		0.0433	0.00350	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (0.5-5)**

**Lab Sample ID: 600-85318-7**

**Date Collected: 01/08/14 13:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.7**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.0127	U	0.0433	0.0127	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
3-Nitroaniline	0.0186	U	0.0433	0.0186	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Nitroaniline	0.0289	U	0.0433	0.0289	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Nitrobenzene	0.00768	U	0.0433	0.00768	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2-Nitrophenol	0.0101	U	0.0433	0.0101	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
4-Nitrophenol	0.0132	U	0.0433	0.0132	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
N-Nitrosodimethylamine	0.0109	U	0.0433	0.0109	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
N-Nitrosodi-n-propylamine	0.00576	U	0.0433	0.00576	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
N-Nitrosodiphenylamine	0.00490	U	0.0433	0.00490	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Pentachlorophenol	0.0104	U	0.433	0.0104	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Phenanthrene	0.0321	J	0.0433	0.0128	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Phenol	0.241		0.0433	0.0110	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
Pyrene	0.0181	J	0.0433	0.00475	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
1,2,4-Trichlorobenzene	0.00545	U	0.0433	0.00545	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4,5-Trichlorophenol	0.0260	U	0.0433	0.0260	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1
2,4,6-Trichlorophenol	0.00695	U	0.0433	0.00695	mg/Kg	☼	01/17/14 13:18	01/21/14 02:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	112		38 - 127	01/17/14 13:18	01/21/14 02:59	1
2-Fluorophenol	126		25 - 132	01/17/14 13:18	01/21/14 02:59	1
Nitrobenzene-d5	19		10 - 155	01/17/14 13:18	01/21/14 02:59	1
Phenol-d5 (Surr)	114		27 - 123	01/17/14 13:18	01/21/14 02:59	1
Terphenyl-d14	128		53 - 134	01/17/14 13:18	01/21/14 02:59	1
2,4,6-Tribromophenol	98		10 - 148	01/17/14 13:18	01/21/14 02:59	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.95	U	13.0	4.95	mg/Kg	☼	01/14/14 12:54	01/14/14 17:17	1
>C12-C28	5.28	U	13.0	5.28	mg/Kg	☼	01/14/14 12:54	01/14/14 17:17	1
>C28-C35	5.28	U	13.0	5.28	mg/Kg	☼	01/14/14 12:54	01/14/14 17:17	1
C6-C35	9.74	U	13.0	9.74	mg/Kg	☼	01/14/14 12:54	01/14/14 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		70 - 130	01/14/14 12:54	01/14/14 17:17	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	46.6		0.311	0.0319	mg/Kg	☼	01/13/14 14:19	01/14/14 08:52	1

## Method: 6010B - Metals (ICP) - DL

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	21200		6.21	1.30	mg/Kg	☼	01/13/14 14:19	01/15/14 10:39	10

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (10-12)**

**Lab Sample ID: 600-85318-8**

**Date Collected: 01/08/14 13:35**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 75.0**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.0671</b>		0.0133	0.00221	mg/Kg	☼		01/17/14 12:32	1
Benzene	0.000840	U	0.00667	0.000840	mg/Kg	☼		01/17/14 12:32	1
Chlorobromomethane	0.00237	U	0.00667	0.00237	mg/Kg	☼		01/17/14 12:32	1
Bromoform	0.00183	U	0.00667	0.00183	mg/Kg	☼		01/17/14 12:32	1
Bromomethane	0.00111	U	0.0133	0.00111	mg/Kg	☼		01/17/14 12:32	1
<b>2-Butanone (MEK)</b>	<b>0.0101</b>	<b>J</b>	0.0133	0.00253	mg/Kg	☼		01/17/14 12:32	1
<b>Carbon disulfide</b>	<b>0.000745</b>	<b>J</b>	0.0133	0.000733	mg/Kg	☼		01/17/14 12:32	1
Carbon tetrachloride	0.00151	U	0.00667	0.00151	mg/Kg	☼		01/17/14 12:32	1
Dibromochloromethane	0.00125	U	0.00667	0.00125	mg/Kg	☼		01/17/14 12:32	1
Chlorobenzene	0.00128	U	0.00667	0.00128	mg/Kg	☼		01/17/14 12:32	1
Chloroethane	0.00187	U	0.0133	0.00187	mg/Kg	☼		01/17/14 12:32	1
Chloroform	0.000880	U	0.00667	0.000880	mg/Kg	☼		01/17/14 12:32	1
Chloromethane	0.00221	U	0.0133	0.00221	mg/Kg	☼		01/17/14 12:32	1
1,1-Dichloroethane	0.00116	U	0.00667	0.00116	mg/Kg	☼		01/17/14 12:32	1
1,2-Dichloroethane	0.00120	U	0.00667	0.00120	mg/Kg	☼		01/17/14 12:32	1
1,1-Dichloroethene	0.00163	U	0.00667	0.00163	mg/Kg	☼		01/17/14 12:32	1
cis-1,2-Dichloroethene	0.00111	U	0.00667	0.00111	mg/Kg	☼		01/17/14 12:32	1
trans-1,2-Dichloroethene	0.00152	U	0.00667	0.00152	mg/Kg	☼		01/17/14 12:32	1
1,2-Dichloropropane	0.000947	U	0.00667	0.000947	mg/Kg	☼		01/17/14 12:32	1
cis-1,3-Dichloropropene	0.000720	U	0.00667	0.000720	mg/Kg	☼		01/17/14 12:32	1
trans-1,3-Dichloropropene	0.000773	U	0.00667	0.000773	mg/Kg	☼		01/17/14 12:32	1
Ethylbenzene	0.00136	U	0.00667	0.00136	mg/Kg	☼		01/17/14 12:32	1
2-Hexanone	0.00135	U	0.0133	0.00135	mg/Kg	☼		01/17/14 12:32	1
<b>Methylene Chloride</b>	<b>0.00549</b>	<b>J</b>	0.0133	0.00292	mg/Kg	☼		01/17/14 12:32	1
4-Methyl-2-pentanone (MIBK)	0.00196	U	0.0133	0.00196	mg/Kg	☼		01/17/14 12:32	1
Styrene	0.000947	U	0.00667	0.000947	mg/Kg	☼		01/17/14 12:32	1
1,1,2,2-Tetrachloroethane	0.00116	U	0.00667	0.00116	mg/Kg	☼		01/17/14 12:32	1
Tetrachloroethene	0.000947	U	0.00667	0.000947	mg/Kg	☼		01/17/14 12:32	1
<b>Toluene</b>	<b>0.00313</b>	<b>J b</b>	0.00667	0.00184	mg/Kg	☼		01/17/14 12:32	1
1,1,1-Trichloroethane	0.000987	U	0.00667	0.000987	mg/Kg	☼		01/17/14 12:32	1
1,1,2-Trichloroethane	0.000973	U	0.00667	0.000973	mg/Kg	☼		01/17/14 12:32	1
Trichloroethene	0.00187	U	0.00667	0.00187	mg/Kg	☼		01/17/14 12:32	1
Vinyl acetate	0.00124	U	0.00667	0.00124	mg/Kg	☼		01/17/14 12:32	1
Vinyl chloride	0.00120	U	0.0133	0.00120	mg/Kg	☼		01/17/14 12:32	1
o-Xylene	0.00151	U	0.00667	0.00151	mg/Kg	☼		01/17/14 12:32	1
m-Xylene & p-Xylene	0.00203	U	0.0133	0.00203	mg/Kg	☼		01/17/14 12:32	1
Xylenes, Total	0.00151	U	0.00667	0.00151	mg/Kg	☼		01/17/14 12:32	1
Bromodichloromethane	0.000880	U	0.00667	0.000880	mg/Kg	☼		01/17/14 12:32	1
1,2-Dichloroethene, Total	0.00253	U	0.0133	0.00253	mg/Kg	☼		01/17/14 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		50 - 130		01/17/14 12:32	1
Dibromofluoromethane	101		68 - 140		01/17/14 12:32	1
4-Bromofluorobenzene	101		57 - 140		01/17/14 12:32	1
1,2-Dichloroethane-d4 (Surr)	98		61 - 130		01/17/14 12:32	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.384	U	4.45	0.384	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Acenaphthylene	0.267	U	4.45	0.267	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (10-12)**

**Lab Sample ID: 600-85318-8**

**Date Collected: 01/08/14 13:35**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 75.0**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.341	U *	4.45	0.341	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzidine	2.41	U *	22.2	2.41	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzo[a]anthracene	0.368	U	4.45	0.368	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzo[a]pyrene	0.429	U	4.45	0.429	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzo[b]fluoranthene	0.459	U	4.45	0.459	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzo[g,h,i]perylene	1.35	U	4.45	1.35	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzo[k]fluoranthene	0.397	U	4.45	0.397	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Benzyl alcohol	1.55	U	4.45	1.55	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Bis(2-chloroethoxy)methane	0.379	U	4.45	0.379	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Bis(2-chloroethyl)ether	0.440	U	4.45	0.440	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
bis (2-Chloroisopropyl) ether	2.36	U	4.45	2.36	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Bis(2-ethylhexyl) phthalate	1.43	U	17.8	1.43	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Bromophenyl phenyl ether	0.757	U *	4.45	0.757	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Butyl benzyl phthalate	1.65	U	17.8	1.65	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Carbazole	0.832	U *	4.45	0.832	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Chloroaniline	1.55	U	4.45	1.55	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Chloro-3-methylphenol	4.16	U	4.45	4.16	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2-Chloronaphthalene	0.323	U	4.45	0.323	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2-Chlorophenol	0.525	U	4.45	0.525	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Chlorophenyl phenyl ether	0.480	U	4.45	0.480	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Chrysene	0.272	U	4.45	0.272	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Dibenz(a,h)anthracene	0.968	U	4.45	0.968	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
<b>Dibenzofuran</b>	<b>6.33</b>		4.45	0.475	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
1,2-Dichlorobenzene	0.805	U	4.45	0.805	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
1,3-Dichlorobenzene	0.411	U	4.45	0.411	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
1,4-Dichlorobenzene	0.600	U	4.45	0.600	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
3,3'-Dichlorobenzidine	2.71	U	4.45	2.71	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4-Dichlorophenol	1.03	U	4.45	1.03	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Diethyl phthalate	2.25	U	17.8	2.25	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4-Dimethylphenol	2.29	U	4.45	2.29	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Dimethyl phthalate	1.30	U	17.8	1.30	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Di-n-butyl phthalate	0.691	U *	17.8	0.691	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4,6-Dinitro-2-methylphenol	1.33	U *	4.45	1.33	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4-Dinitrophenol	1.26	U	26.7	1.26	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4-Dinitrotoluene	0.963	U	4.45	0.963	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,6-Dinitrotoluene	0.787	U	4.45	0.787	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Di-n-octyl phthalate	0.507	U	17.8	0.507	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Fluoranthene	0.829	U *	4.45	0.829	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
<b>Fluorene</b>	<b>6.48</b>		4.45	0.629	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Hexachlorobenzene	0.405	U *	4.45	0.405	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Hexachlorobutadiene	0.512	U	4.45	0.512	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Hexachlorocyclopentadiene	1.23	U	4.45	1.23	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Hexachloroethane	0.616	U	4.45	0.616	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Indeno[1,2,3-cd]pyrene	0.933	U	4.45	0.933	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Isophorone	0.267	U	4.45	0.267	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
<b>2-Methylnaphthalene</b>	<b>3.19</b>	<b>J</b>	4.45	0.731	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2-Methylphenol	0.861	U	4.45	0.861	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
3 & 4 Methylphenol	0.744	U	8.89	0.744	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Naphthalene	0.360	U	4.45	0.360	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (10-12)**

**Lab Sample ID: 600-85318-8**

**Date Collected: 01/08/14 13:35**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 75.0**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	1.30	U	4.45	1.30	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
3-Nitroaniline	1.91	U	4.45	1.91	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Nitroaniline	2.97	U	4.45	2.97	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Nitrobenzene	0.789	U	4.45	0.789	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2-Nitrophenol	1.04	U	4.45	1.04	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
4-Nitrophenol	1.35	U	4.45	1.35	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
N-Nitrosodimethylamine	1.12	U	4.45	1.12	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
N-Nitrosodi-n-propylamine	0.592	U	4.45	0.592	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
N-Nitrosodiphenylamine	0.504	U *	4.45	0.504	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Pentachlorophenol	1.07	U *	44.5	1.07	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Phenanthrene	5.36	*	4.45	1.32	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Phenol	1.13	U	4.45	1.13	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
Pyrene	1.26	J	4.45	0.488	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
1,2,4-Trichlorobenzene	0.560	U	4.45	0.560	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4,5-Trichlorophenol	2.67	U	4.45	2.67	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100
2,4,6-Trichlorophenol	0.715	U	4.45	0.715	mg/Kg	☼	01/17/14 13:18	01/22/14 22:21	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	0	X	38 - 127	01/17/14 13:18	01/22/14 22:21	100
2-Fluorophenol	0	X	25 - 132	01/17/14 13:18	01/22/14 22:21	100
Nitrobenzene-d5	0	X	10 - 155	01/17/14 13:18	01/22/14 22:21	100
Phenol-d5 (Surr)	0	X	27 - 123	01/17/14 13:18	01/22/14 22:21	100
Terphenyl-d14	0	X	53 - 134	01/17/14 13:18	01/22/14 22:21	100
2,4,6-Tribromophenol	0	X	10 - 148	01/17/14 13:18	01/22/14 22:21	100

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	299		66.5	25.3	mg/Kg	☼	01/14/14 12:54	01/15/14 09:36	5
>C12-C28	2410		66.5	27.0	mg/Kg	☼	01/14/14 12:54	01/15/14 09:36	5
>C28-C35	334		66.5	27.0	mg/Kg	☼	01/14/14 12:54	01/15/14 09:36	5
C6-C35	3050		66.5	49.7	mg/Kg	☼	01/14/14 12:54	01/15/14 09:36	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	218	X	70 - 130	01/14/14 12:54	01/15/14 09:36	5

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	2.15		0.330	0.0339	mg/Kg	☼	01/13/14 14:19	01/14/14 08:55	1
Lead	2390		0.660	0.138	mg/Kg	☼	01/13/14 14:19	01/14/14 08:55	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%	—		01/13/14 09:59	1
Percent Moisture	25		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	75		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	75		1.0	1.0	%			01/13/14 09:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-4 (0.83-1.33)**

**Lab Sample ID: 600-85318-11**

**Date Collected: 01/08/14 15:15**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.4**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.298</b>		0.0131	0.00217	mg/Kg	☼		01/15/14 21:55	1
Benzene	0.000824	U	0.00654	0.000824	mg/Kg	☼		01/15/14 21:55	1
Chlorobromomethane	0.00233	U	0.00654	0.00233	mg/Kg	☼		01/15/14 21:55	1
Bromoform	0.00179	U	0.00654	0.00179	mg/Kg	☼		01/15/14 21:55	1
Bromomethane	0.00109	U	0.0131	0.00109	mg/Kg	☼		01/15/14 21:55	1
<b>2-Butanone (MEK)</b>	<b>0.0358</b>		0.0131	0.00249	mg/Kg	☼		01/15/14 21:55	1
<b>Carbon disulfide</b>	<b>0.00386</b>	<b>J</b>	0.0131	0.000719	mg/Kg	☼		01/15/14 21:55	1
Carbon tetrachloride	0.00148	U	0.00654	0.00148	mg/Kg	☼		01/15/14 21:55	1
Dibromochloromethane	0.00123	U	0.00654	0.00123	mg/Kg	☼		01/15/14 21:55	1
Chlorobenzene	0.00126	U	0.00654	0.00126	mg/Kg	☼		01/15/14 21:55	1
Chloroethane	0.00183	U	0.0131	0.00183	mg/Kg	☼		01/15/14 21:55	1
Chloroform	0.000863	U	0.00654	0.000863	mg/Kg	☼		01/15/14 21:55	1
Chloromethane	0.00217	U	0.0131	0.00217	mg/Kg	☼		01/15/14 21:55	1
1,1-Dichloroethane	0.00114	U	0.00654	0.00114	mg/Kg	☼		01/15/14 21:55	1
1,2-Dichloroethane	0.00118	U	0.00654	0.00118	mg/Kg	☼		01/15/14 21:55	1
1,1-Dichloroethene	0.00160	U	0.00654	0.00160	mg/Kg	☼		01/15/14 21:55	1
cis-1,2-Dichloroethene	0.00109	U	0.00654	0.00109	mg/Kg	☼		01/15/14 21:55	1
trans-1,2-Dichloroethene	0.00149	U	0.00654	0.00149	mg/Kg	☼		01/15/14 21:55	1
1,2-Dichloropropane	0.000929	U	0.00654	0.000929	mg/Kg	☼		01/15/14 21:55	1
cis-1,3-Dichloropropene	0.000706	U	0.00654	0.000706	mg/Kg	☼		01/15/14 21:55	1
trans-1,3-Dichloropropene	0.000759	U	0.00654	0.000759	mg/Kg	☼		01/15/14 21:55	1
Ethylbenzene	0.00133	U	0.00654	0.00133	mg/Kg	☼		01/15/14 21:55	1
2-Hexanone	0.00132	U	0.0131	0.00132	mg/Kg	☼		01/15/14 21:55	1
Methylene Chloride	0.00286	U	0.0131	0.00286	mg/Kg	☼		01/15/14 21:55	1
4-Methyl-2-pentanone (MIBK)	0.00192	U	0.0131	0.00192	mg/Kg	☼		01/15/14 21:55	1
Styrene	0.000929	U	0.00654	0.000929	mg/Kg	☼		01/15/14 21:55	1
1,1,2,2-Tetrachloroethane	0.00114	U	0.00654	0.00114	mg/Kg	☼		01/15/14 21:55	1
Tetrachloroethene	0.000929	U	0.00654	0.000929	mg/Kg	☼		01/15/14 21:55	1
Toluene	0.00181	U	0.00654	0.00181	mg/Kg	☼		01/15/14 21:55	1
1,1,1-Trichloroethane	0.000968	U	0.00654	0.000968	mg/Kg	☼		01/15/14 21:55	1
1,1,2-Trichloroethane	0.000955	U	0.00654	0.000955	mg/Kg	☼		01/15/14 21:55	1
Trichloroethene	0.00183	U	0.00654	0.00183	mg/Kg	☼		01/15/14 21:55	1
Vinyl acetate	0.00122	U	0.00654	0.00122	mg/Kg	☼		01/15/14 21:55	1
Vinyl chloride	0.00118	U	0.0131	0.00118	mg/Kg	☼		01/15/14 21:55	1
o-Xylene	0.00148	U	0.00654	0.00148	mg/Kg	☼		01/15/14 21:55	1
m-Xylene & p-Xylene	0.00199	U	0.0131	0.00199	mg/Kg	☼		01/15/14 21:55	1
Xylenes, Total	0.00148	U	0.00654	0.00148	mg/Kg	☼		01/15/14 21:55	1
Bromodichloromethane	0.000863	U	0.00654	0.000863	mg/Kg	☼		01/15/14 21:55	1
1,2-Dichloroethene, Total	0.00249	U	0.0131	0.00249	mg/Kg	☼		01/15/14 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	86		50 - 130		01/15/14 21:55	1
Dibromofluoromethane	92		68 - 140		01/15/14 21:55	1
4-Bromofluorobenzene	99		57 - 140		01/15/14 21:55	1
1,2-Dichloroethane-d4 (Surr)	86		61 - 130		01/15/14 21:55	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.495</b>		0.318	0.0326	mg/Kg	☼	01/13/14 14:19	01/14/14 08:57	1
<b>Lead</b>	<b>24.4</b>		0.635	0.133	mg/Kg	☼	01/13/14 14:19	01/14/14 08:57	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	76		1.0	1.0	%			01/13/14 09:59	1

Client Sample ID: MW-27D (0.5-2)

Lab Sample ID: 600-85318-14

Date Collected: 01/08/14 15:45

Matrix: Solid

Date Received: 01/10/14 10:31

Percent Solids: 77.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.0549		0.0129	0.00214	mg/Kg	☼		01/15/14 22:19	1
Benzene	0.000813	U	0.00645	0.000813	mg/Kg	☼		01/15/14 22:19	1
Chlorobromomethane	0.00230	U	0.00645	0.00230	mg/Kg	☼		01/15/14 22:19	1
Bromoform	0.00177	U	0.00645	0.00177	mg/Kg	☼		01/15/14 22:19	1
Bromomethane	0.00107	U	0.0129	0.00107	mg/Kg	☼		01/15/14 22:19	1
2-Butanone (MEK)	0.0165		0.0129	0.00245	mg/Kg	☼		01/15/14 22:19	1
Carbon disulfide	0.00364	J	0.0129	0.000710	mg/Kg	☼		01/15/14 22:19	1
Carbon tetrachloride	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 22:19	1
Dibromochloromethane	0.00121	U	0.00645	0.00121	mg/Kg	☼		01/15/14 22:19	1
Chlorobenzene	0.00124	U	0.00645	0.00124	mg/Kg	☼		01/15/14 22:19	1
Chloroethane	0.00181	U	0.0129	0.00181	mg/Kg	☼		01/15/14 22:19	1
Chloroform	0.000852	U	0.00645	0.000852	mg/Kg	☼		01/15/14 22:19	1
Chloromethane	0.00214	U	0.0129	0.00214	mg/Kg	☼		01/15/14 22:19	1
1,1-Dichloroethane	0.00112	U	0.00645	0.00112	mg/Kg	☼		01/15/14 22:19	1
1,2-Dichloroethane	0.00116	U	0.00645	0.00116	mg/Kg	☼		01/15/14 22:19	1
1,1-Dichloroethene	0.00157	U	0.00645	0.00157	mg/Kg	☼		01/15/14 22:19	1
cis-1,2-Dichloroethene	0.00107	U	0.00645	0.00107	mg/Kg	☼		01/15/14 22:19	1
trans-1,2-Dichloroethene	0.00147	U	0.00645	0.00147	mg/Kg	☼		01/15/14 22:19	1
1,2-Dichloropropane	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 22:19	1
cis-1,3-Dichloropropene	0.000697	U	0.00645	0.000697	mg/Kg	☼		01/15/14 22:19	1
trans-1,3-Dichloropropene	0.000748	U	0.00645	0.000748	mg/Kg	☼		01/15/14 22:19	1
Ethylbenzene	0.00132	U	0.00645	0.00132	mg/Kg	☼		01/15/14 22:19	1
2-Hexanone	0.00130	U	0.0129	0.00130	mg/Kg	☼		01/15/14 22:19	1
Methylene Chloride	0.00932	J	0.0129	0.00283	mg/Kg	☼		01/15/14 22:19	1
4-Methyl-2-pentanone (MIBK)	0.00190	U	0.0129	0.00190	mg/Kg	☼		01/15/14 22:19	1
Styrene	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 22:19	1
1,1,2,2-Tetrachloroethane	0.00112	U	0.00645	0.00112	mg/Kg	☼		01/15/14 22:19	1
Tetrachloroethene	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 22:19	1
Toluene	0.00197	J	0.00645	0.00178	mg/Kg	☼		01/15/14 22:19	1
1,1,1-Trichloroethane	0.000955	U	0.00645	0.000955	mg/Kg	☼		01/15/14 22:19	1
1,1,2-Trichloroethane	0.000942	U	0.00645	0.000942	mg/Kg	☼		01/15/14 22:19	1
Trichloroethene	0.00181	U	0.00645	0.00181	mg/Kg	☼		01/15/14 22:19	1
Vinyl acetate	0.00120	U	0.00645	0.00120	mg/Kg	☼		01/15/14 22:19	1
Vinyl chloride	0.00116	U	0.0129	0.00116	mg/Kg	☼		01/15/14 22:19	1
o-Xylene	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 22:19	1
m-Xylene & p-Xylene	0.00196	U	0.0129	0.00196	mg/Kg	☼		01/15/14 22:19	1
Xylenes, Total	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 22:19	1
Bromodichloromethane	0.000852	U	0.00645	0.000852	mg/Kg	☼		01/15/14 22:19	1
1,2-Dichloroethene, Total	0.00245	U	0.0129	0.00245	mg/Kg	☼		01/15/14 22:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		50 - 130		01/15/14 22:19	1
Dibromofluoromethane	88		68 - 140		01/15/14 22:19	1
4-Bromofluorobenzene	102		57 - 140		01/15/14 22:19	1
1,2-Dichloroethane-d4 (Surr)	77		61 - 130		01/15/14 22:19	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.00347	U	0.0429	0.00347	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
2-Methylnaphthalene	0.00704	U	0.0429	0.00704	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
1-Methylnaphthalene	0.00404	U	0.0429	0.00404	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Acenaphthylene	0.00257	U	0.0429	0.00257	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Acenaphthene	0.00370	U	0.0429	0.00370	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Fluorene	0.00607	U	0.0429	0.00607	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Phenanthrene	0.0127	U	0.0429	0.0127	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Anthracene	0.00329	U	0.0429	0.00329	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Fluoranthene	0.0155	J	0.0429	0.00799	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Pyrene	0.0166	J	0.0429	0.00470	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Benzo[a]anthracene	0.00355	U	0.0429	0.00355	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Chrysene	0.00262	U	0.0429	0.00262	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Benzo[b]fluoranthene	0.00442	U	0.0429	0.00442	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Benzo[k]fluoranthene	0.00383	U	0.0429	0.00383	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Benzo[a]pyrene	0.00414	U	0.0429	0.00414	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Indeno[1,2,3-cd]pyrene	0.00900	U	0.0429	0.00900	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Dibenz(a,h)anthracene	0.00933	U	0.0429	0.00933	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1
Benzo[g,h,i]perylene	0.0130	U	0.0429	0.0130	mg/Kg	☼	01/17/14 13:18	01/21/14 03:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	55		25 - 132	01/17/14 13:18	01/21/14 03:53	1
Nitrobenzene-d5	18		10 - 155	01/17/14 13:18	01/21/14 03:53	1
2-Fluorobiphenyl	92		38 - 127	01/17/14 13:18	01/21/14 03:53	1
2,4,6-Tribromophenol	59		10 - 148	01/17/14 13:18	01/21/14 03:53	1
Terphenyl-d14	121		53 - 134	01/17/14 13:18	01/21/14 03:53	1
Phenol-d5 (Surr)	121		27 - 123	01/17/14 13:18	01/21/14 03:53	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.87	U	12.8	4.87	mg/Kg	☼	01/14/14 12:54	01/14/14 18:25	1
>C12-C28	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 18:25	1
>C28-C35	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 18:25	1
C6-C35	9.59	U	12.8	9.59	mg/Kg	☼	01/14/14 12:54	01/14/14 18:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		70 - 130	01/14/14 12:54	01/14/14 18:25	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	15.1		0.313	0.0321	mg/Kg	☼	01/13/14 14:19	01/14/14 08:31	1
Lead	315		0.626	0.131	mg/Kg	☼	01/13/14 14:19	01/14/14 08:31	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1

Client Sample ID: MW-27C (0-2)

Date Collected: 01/08/14 16:20

Date Received: 01/10/14 10:31

Lab Sample ID: 600-85318-16

Matrix: Solid

Percent Solids: 78.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00213	U	0.0128	0.00213	mg/Kg	☼		01/15/14 22:43	1
Benzene	0.000808	U	0.00641	0.000808	mg/Kg	☼		01/15/14 22:43	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27C (0-2)**

**Lab Sample ID: 600-85318-16**

**Date Collected: 01/08/14 16:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.0**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	0.00228	U	0.00641	0.00228	mg/Kg	☼		01/15/14 22:43	1
Bromoform	0.00176	U	0.00641	0.00176	mg/Kg	☼		01/15/14 22:43	1
Bromomethane	0.00106	U	0.0128	0.00106	mg/Kg	☼		01/15/14 22:43	1
2-Butanone (MEK)	0.00244	U	0.0128	0.00244	mg/Kg	☼		01/15/14 22:43	1
Carbon disulfide	0.000705	U	0.0128	0.000705	mg/Kg	☼		01/15/14 22:43	1
Carbon tetrachloride	0.00145	U	0.00641	0.00145	mg/Kg	☼		01/15/14 22:43	1
Dibromochloromethane	0.00120	U	0.00641	0.00120	mg/Kg	☼		01/15/14 22:43	1
Chlorobenzene	0.00123	U	0.00641	0.00123	mg/Kg	☼		01/15/14 22:43	1
Chloroethane	0.00179	U	0.0128	0.00179	mg/Kg	☼		01/15/14 22:43	1
Chloroform	0.000846	U	0.00641	0.000846	mg/Kg	☼		01/15/14 22:43	1
Chloromethane	0.00213	U	0.0128	0.00213	mg/Kg	☼		01/15/14 22:43	1
1,1-Dichloroethane	0.00112	U	0.00641	0.00112	mg/Kg	☼		01/15/14 22:43	1
1,2-Dichloroethane	0.00115	U	0.00641	0.00115	mg/Kg	☼		01/15/14 22:43	1
1,1-Dichloroethene	0.00156	U	0.00641	0.00156	mg/Kg	☼		01/15/14 22:43	1
cis-1,2-Dichloroethene	0.00106	U	0.00641	0.00106	mg/Kg	☼		01/15/14 22:43	1
trans-1,2-Dichloroethene	0.00146	U	0.00641	0.00146	mg/Kg	☼		01/15/14 22:43	1
1,2-Dichloropropane	0.000910	U	0.00641	0.000910	mg/Kg	☼		01/15/14 22:43	1
cis-1,3-Dichloropropene	0.000692	U	0.00641	0.000692	mg/Kg	☼		01/15/14 22:43	1
trans-1,3-Dichloropropene	0.000743	U	0.00641	0.000743	mg/Kg	☼		01/15/14 22:43	1
Ethylbenzene	0.00131	U	0.00641	0.00131	mg/Kg	☼		01/15/14 22:43	1
2-Hexanone	0.00129	U	0.0128	0.00129	mg/Kg	☼		01/15/14 22:43	1
Methylene Chloride	0.00281	U	0.0128	0.00281	mg/Kg	☼		01/15/14 22:43	1
4-Methyl-2-pentanone (MIBK)	0.00188	U	0.0128	0.00188	mg/Kg	☼		01/15/14 22:43	1
Styrene	0.000910	U	0.00641	0.000910	mg/Kg	☼		01/15/14 22:43	1
1,1,2,2-Tetrachloroethane	0.00112	U	0.00641	0.00112	mg/Kg	☼		01/15/14 22:43	1
Tetrachloroethene	0.000910	U	0.00641	0.000910	mg/Kg	☼		01/15/14 22:43	1
Toluene	0.00177	U	0.00641	0.00177	mg/Kg	☼		01/15/14 22:43	1
1,1,1-Trichloroethane	0.000949	U	0.00641	0.000949	mg/Kg	☼		01/15/14 22:43	1
1,1,2-Trichloroethane	0.000936	U	0.00641	0.000936	mg/Kg	☼		01/15/14 22:43	1
Trichloroethene	0.00179	U	0.00641	0.00179	mg/Kg	☼		01/15/14 22:43	1
Vinyl acetate	0.00119	U	0.00641	0.00119	mg/Kg	☼		01/15/14 22:43	1
Vinyl chloride	0.00115	U	0.0128	0.00115	mg/Kg	☼		01/15/14 22:43	1
o-Xylene	0.00145	U	0.00641	0.00145	mg/Kg	☼		01/15/14 22:43	1
m-Xylene & p-Xylene	0.00195	U	0.0128	0.00195	mg/Kg	☼		01/15/14 22:43	1
Xylenes, Total	0.00145	U	0.00641	0.00145	mg/Kg	☼		01/15/14 22:43	1
Bromodichloromethane	0.000846	U	0.00641	0.000846	mg/Kg	☼		01/15/14 22:43	1
1,2-Dichloroethene, Total	0.00244	U	0.0128	0.00244	mg/Kg	☼		01/15/14 22:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		50 - 130		01/15/14 22:43	1
Dibromofluoromethane	89		68 - 140		01/15/14 22:43	1
4-Bromofluorobenzene	113		57 - 140		01/15/14 22:43	1
1,2-Dichloroethane-d4 (Surr)	81		61 - 130		01/15/14 22:43	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.00612	J	0.0424	0.00343	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
2-Methylnaphthalene	0.00706	J	0.0424	0.00696	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
1-Methylnaphthalene	0.00399	U	0.0424	0.00399	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Acenaphthylene	0.00254	U	0.0424	0.00254	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27C (0-2)**

**Lab Sample ID: 600-85318-16**

**Date Collected: 01/08/14 16:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.0**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.00366	U	0.0424	0.00366	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Fluorene	0.00600	U	0.0424	0.00600	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Phenanthrene</b>	<b>0.0133</b>	<b>J</b>	0.0424	0.0126	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Anthracene</b>	<b>0.00824</b>	<b>J</b>	0.0424	0.00325	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Fluoranthene	0.00790	U	0.0424	0.00790	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Pyrene</b>	<b>0.0106</b>	<b>J</b>	0.0424	0.00465	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Benzo[a]anthracene</b>	<b>0.0123</b>	<b>J</b>	0.0424	0.00351	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Chrysene</b>	<b>0.0297</b>	<b>J</b>	0.0424	0.00259	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Benzo[b]fluoranthene</b>	<b>0.0202</b>	<b>J</b>	0.0424	0.00437	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Benzo[k]fluoranthene	0.00379	U	0.0424	0.00379	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
<b>Benzo[a]pyrene</b>	<b>0.0138</b>	<b>J</b>	0.0424	0.00409	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Indeno[1,2,3-cd]pyrene	0.00890	U	0.0424	0.00890	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Dibenz(a,h)anthracene	0.00923	U	0.0424	0.00923	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1
Benzo[g,h,i]perylene	0.0129	U	0.0424	0.0129	mg/Kg	☼	01/15/14 08:14	01/17/14 12:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	123		25 - 132	01/15/14 08:14	01/17/14 12:30	1
Nitrobenzene-d5	110		10 - 155	01/15/14 08:14	01/17/14 12:30	1
2-Fluorobiphenyl	114		38 - 127	01/15/14 08:14	01/17/14 12:30	1
2,4,6-Tribromophenol	103		10 - 148	01/15/14 08:14	01/17/14 12:30	1
Terphenyl-d14	125		53 - 134	01/15/14 08:14	01/17/14 12:30	1
Phenol-d5 (Surr)	111		27 - 123	01/15/14 08:14	01/17/14 12:30	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.87	U	12.8	4.87	mg/Kg	☼	01/14/14 12:54	01/14/14 19:00	1
>C12-C28	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 19:00	1
>C28-C35	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 19:00	1
C6-C35	9.58	U	12.8	9.58	mg/Kg	☼	01/14/14 12:54	01/14/14 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	100		70 - 130	01/14/14 12:54	01/14/14 19:00	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>9.11</b>	<b>b</b>	0.297	0.0304	mg/Kg	☼	01/14/14 12:46	01/15/14 13:22	1
<b>Lead</b>	<b>1830</b>		0.593	0.124	mg/Kg	☼	01/14/14 12:46	01/15/14 13:22	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Percent Moisture</b>	<b>22</b>		1.0	1.0	%			01/14/14 13:52	1
<b>Percent Solids</b>	<b>78</b>		1.0	1.0	%			01/14/14 13:52	1

**Client Sample ID: MW-41 (0-0.5)**

**Lab Sample ID: 600-85318-17**

**Date Collected: 01/08/14 13:40**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.4**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>8.00</b>		1.25	0.272	mg/Kg	☼	01/13/14 14:19	01/14/14 09:00	1
<b>Cadmium</b>	<b>0.474</b>		0.312	0.0320	mg/Kg	☼	01/13/14 14:19	01/14/14 09:00	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Client Sample ID: MW-41 (0-0.5)

Date Collected: 01/08/14 13:40

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-17

Matrix: Solid

Percent Solids: 76.4

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	18.4		0.624	0.131	mg/Kg	☼	01/13/14 14:19	01/14/14 09:00	1
Selenium	0.323	U	2.49	0.323	mg/Kg	☼	01/13/14 14:19	01/14/14 09:00	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	76		1.0	1.0	%			01/13/14 09:59	1

## Client Sample ID: MW-41 (0.5-2)

Date Collected: 01/08/14 13:45

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-18

Matrix: Solid

Percent Solids: 76.6

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.1		1.31	0.285	mg/Kg	☼	01/13/14 14:19	01/14/14 09:02	1
Cadmium	0.810		0.327	0.0335	mg/Kg	☼	01/13/14 14:19	01/14/14 09:02	1
Lead	92.5		0.653	0.137	mg/Kg	☼	01/13/14 14:19	01/14/14 09:02	1
Selenium	0.338	U	2.61	0.338	mg/Kg	☼	01/13/14 14:19	01/14/14 09:02	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1

## Client Sample ID: MW-42 (0-0.5)

Date Collected: 01/08/14 15:40

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-19

Matrix: Solid

Percent Solids: 72.7

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.2		1.26	0.275	mg/Kg	☼	01/13/14 14:19	01/14/14 09:05	1
Cadmium	1.56		0.315	0.0324	mg/Kg	☼	01/13/14 14:19	01/14/14 09:05	1
Lead	230		0.631	0.132	mg/Kg	☼	01/13/14 14:19	01/14/14 09:05	1
Selenium	0.580	J	2.52	0.327	mg/Kg	☼	01/13/14 14:19	01/14/14 09:05	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	73		1.0	1.0	%			01/13/14 09:59	1

## Client Sample ID: MW-42 (0.5-2)

Date Collected: 01/08/14 15:45

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-20

Matrix: Solid

Percent Solids: 74.0

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.287	U	3.10	0.287	mg/Kg	☼	01/13/14 14:19	01/14/14 09:07	1
Arsenic	13.9		1.24	0.270	mg/Kg	☼	01/13/14 14:19	01/14/14 09:07	1
Cadmium	1.82		0.310	0.0318	mg/Kg	☼	01/13/14 14:19	01/14/14 09:07	1
Lead	241		0.620	0.130	mg/Kg	☼	01/13/14 14:19	01/14/14 09:07	1
Selenium	0.502	J	2.48	0.321	mg/Kg	☼	01/13/14 14:19	01/14/14 09:07	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	74		1.0	1.0	%			01/13/14 09:59	1

Client Sample ID: DUP-6

Date Collected: 01/08/14 00:00

Date Received: 01/10/14 10:31

Lab Sample ID: 600-85318-21

Matrix: Solid

Percent Solids: 77.8

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.39		1.20	0.262	mg/Kg	☼	01/13/14 14:19	01/14/14 09:23	1
Cadmium	0.385		0.300	0.0308	mg/Kg	☼	01/13/14 14:19	01/14/14 09:23	1
Lead	15.0		0.601	0.126	mg/Kg	☼	01/13/14 14:19	01/14/14 09:23	1
Selenium	0.311	U	2.40	0.311	mg/Kg	☼	01/13/14 14:19	01/14/14 09:23	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	78		1.0	1.0	%			01/13/14 09:59	1

Client Sample ID: FIELD BLANK

Date Collected: 01/08/14 17:19

Date Received: 01/10/14 10:31

Lab Sample ID: 600-85318-22

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00227	U	0.0100	0.00227	mg/L			01/11/14 18:04	1
Benzene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:04	1
Chlorobromomethane	0.000810	U	0.00500	0.000810	mg/L			01/11/14 18:04	1
Bromoform	0.000770	U	0.00500	0.000770	mg/L			01/11/14 18:04	1
Bromomethane	0.00215	U	0.0100	0.00215	mg/L			01/11/14 18:04	1
2-Butanone (MEK)	0.00157	U	0.0100	0.00157	mg/L			01/11/14 18:04	1
Carbon disulfide	0.00170	U	0.00500	0.00170	mg/L			01/11/14 18:04	1
Carbon tetrachloride	0.000920	U	0.00500	0.000920	mg/L			01/11/14 18:04	1
Dibromochloromethane	0.000920	U	0.00500	0.000920	mg/L			01/11/14 18:04	1
Chlorobenzene	0.000820	U	0.00500	0.000820	mg/L			01/11/14 18:04	1
Chloroethane	0.00173	U	0.0100	0.00173	mg/L			01/11/14 18:04	1
Chloroform	0.000820	U	0.00500	0.000820	mg/L			01/11/14 18:04	1
Chloromethane	0.000850	U	0.0100	0.000850	mg/L			01/11/14 18:04	1
1,1-Dichloroethane	0.000500	U	0.00500	0.000500	mg/L			01/11/14 18:04	1
1,2-Dichloroethane	0.00101	U	0.00500	0.00101	mg/L			01/11/14 18:04	1
1,1-Dichloroethene	0.000760	U	0.00500	0.000760	mg/L			01/11/14 18:04	1
cis-1,2-Dichloroethene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:04	1
trans-1,2-Dichloroethene	0.000880	U	0.00500	0.000880	mg/L			01/11/14 18:04	1
1,2-Dichloropropane	0.00141	U	0.00500	0.00141	mg/L			01/11/14 18:04	1
cis-1,3-Dichloropropene	0.000970	U	0.00500	0.000970	mg/L			01/11/14 18:04	1
trans-1,3-Dichloropropene	0.000590	U	0.00500	0.000590	mg/L			01/11/14 18:04	1
Ethylbenzene	0.00129	U	0.00500	0.00129	mg/L			01/11/14 18:04	1
2-Hexanone	0.00142	U	0.0100	0.00142	mg/L			01/11/14 18:04	1
Methylene Chloride	0.00143	U	0.0100	0.00143	mg/L			01/11/14 18:04	1
4-Methyl-2-pentanone (MIBK)	0.00111	U	0.0100	0.00111	mg/L			01/11/14 18:04	1
Styrene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:04	1
1,1,2,2-Tetrachloroethane	0.000800	U	0.00500	0.000800	mg/L			01/11/14 18:04	1
Tetrachloroethene	0.00124	U	0.00500	0.00124	mg/L			01/11/14 18:04	1
Toluene	0.000550	U	0.00500	0.000550	mg/L			01/11/14 18:04	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Client Sample ID: FIELD BLANK

Date Collected: 01/08/14 17:19

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-22

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000980	U	0.00500	0.000980	mg/L			01/11/14 18:04	1
1,1,2-Trichloroethane	0.000530	U	0.00500	0.000530	mg/L			01/11/14 18:04	1
Trichloroethene	0.00158	U	0.00500	0.00158	mg/L			01/11/14 18:04	1
Vinyl acetate	0.000600	U	0.0100	0.000600	mg/L			01/11/14 18:04	1
Vinyl chloride	0.000850	U	0.00500	0.000850	mg/L			01/11/14 18:04	1
o-Xylene	0.000930	U	0.00500	0.000930	mg/L			01/11/14 18:04	1
m-Xylene & p-Xylene	0.00126	U	0.0100	0.00126	mg/L			01/11/14 18:04	1
Xylenes, Total	0.00198	U	0.00500	0.00198	mg/L			01/11/14 18:04	1
Bromodichloromethane	0.000760	U	0.00500	0.000760	mg/L			01/11/14 18:04	1
1,2-Dichloroethene, Total	0.000840	U	0.0100	0.000840	mg/L			01/11/14 18:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130					01/11/14 18:04	1
Dibromofluoromethane	88		62 - 130					01/11/14 18:04	1
4-Bromofluorobenzene	104		67 - 139					01/11/14 18:04	1
1,2-Dichloroethane-d4 (Surr)	85		50 - 134					01/11/14 18:04	1

## Client Sample ID: RINSE BLANK-CME

Date Collected: 01/09/14 08:50

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-23

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00328	U ^	0.0100	0.00328	mg/L		01/13/14 09:01	01/15/14 12:52	1
Cadmium	0.000600	J ^	0.00500	0.000350	mg/L		01/13/14 09:01	01/15/14 12:52	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/13/14 09:01	01/15/14 12:52	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		01/13/14 09:01	01/15/14 12:52	1

## Client Sample ID: MW-27B (0-2)

Date Collected: 01/09/14 08:55

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-24

Matrix: Solid

Percent Solids: 77.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00214	U	0.0129	0.00214	mg/Kg	☼		01/15/14 23:08	1
Benzene	0.000959	J	0.00645	0.000813	mg/Kg	☼		01/15/14 23:08	1
Chlorobromomethane	0.00230	U	0.00645	0.00230	mg/Kg	☼		01/15/14 23:08	1
Bromoform	0.00177	U	0.00645	0.00177	mg/Kg	☼		01/15/14 23:08	1
Bromomethane	0.00107	U	0.0129	0.00107	mg/Kg	☼		01/15/14 23:08	1
2-Butanone (MEK)	0.00245	U	0.0129	0.00245	mg/Kg	☼		01/15/14 23:08	1
Carbon disulfide	0.000710	U	0.0129	0.000710	mg/Kg	☼		01/15/14 23:08	1
Carbon tetrachloride	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 23:08	1
Dibromochloromethane	0.00121	U	0.00645	0.00121	mg/Kg	☼		01/15/14 23:08	1
Chlorobenzene	0.00124	U	0.00645	0.00124	mg/Kg	☼		01/15/14 23:08	1
Chloroethane	0.00181	U	0.0129	0.00181	mg/Kg	☼		01/15/14 23:08	1
Chloroform	0.000852	U	0.00645	0.000852	mg/Kg	☼		01/15/14 23:08	1
Chloromethane	0.00214	U	0.0129	0.00214	mg/Kg	☼		01/15/14 23:08	1
1,1-Dichloroethane	0.00112	U	0.00645	0.00112	mg/Kg	☼		01/15/14 23:08	1
1,2-Dichloroethane	0.00116	U	0.00645	0.00116	mg/Kg	☼		01/15/14 23:08	1
1,1-Dichloroethene	0.00157	U	0.00645	0.00157	mg/Kg	☼		01/15/14 23:08	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27B (0-2)**

**Lab Sample ID: 600-85318-24**

**Date Collected: 01/09/14 08:55**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 77.5**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.00107	U	0.00645	0.00107	mg/Kg	☼		01/15/14 23:08	1
trans-1,2-Dichloroethene	0.00147	U	0.00645	0.00147	mg/Kg	☼		01/15/14 23:08	1
1,2-Dichloropropane	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 23:08	1
cis-1,3-Dichloropropene	0.000697	U	0.00645	0.000697	mg/Kg	☼		01/15/14 23:08	1
trans-1,3-Dichloropropene	0.000748	U	0.00645	0.000748	mg/Kg	☼		01/15/14 23:08	1
Ethylbenzene	0.00132	U	0.00645	0.00132	mg/Kg	☼		01/15/14 23:08	1
2-Hexanone	0.00130	U	0.0129	0.00130	mg/Kg	☼		01/15/14 23:08	1
Methylene Chloride	0.00283	U	0.0129	0.00283	mg/Kg	☼		01/15/14 23:08	1
4-Methyl-2-pentanone (MIBK)	0.00190	U	0.0129	0.00190	mg/Kg	☼		01/15/14 23:08	1
Styrene	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 23:08	1
1,1,2,2-Tetrachloroethane	0.00112	U	0.00645	0.00112	mg/Kg	☼		01/15/14 23:08	1
Tetrachloroethene	0.000916	U	0.00645	0.000916	mg/Kg	☼		01/15/14 23:08	1
Toluene	0.00178	U	0.00645	0.00178	mg/Kg	☼		01/15/14 23:08	1
1,1,1-Trichloroethane	0.000955	U	0.00645	0.000955	mg/Kg	☼		01/15/14 23:08	1
1,1,2-Trichloroethane	0.000942	U	0.00645	0.000942	mg/Kg	☼		01/15/14 23:08	1
Trichloroethene	0.00181	U	0.00645	0.00181	mg/Kg	☼		01/15/14 23:08	1
Vinyl acetate	0.00120	U	0.00645	0.00120	mg/Kg	☼		01/15/14 23:08	1
Vinyl chloride	0.00116	U	0.0129	0.00116	mg/Kg	☼		01/15/14 23:08	1
o-Xylene	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 23:08	1
m-Xylene & p-Xylene	0.00196	U	0.0129	0.00196	mg/Kg	☼		01/15/14 23:08	1
Xylenes, Total	0.00146	U	0.00645	0.00146	mg/Kg	☼		01/15/14 23:08	1
Bromodichloromethane	0.000852	U	0.00645	0.000852	mg/Kg	☼		01/15/14 23:08	1
1,2-Dichloroethene, Total	0.00245	U	0.0129	0.00245	mg/Kg	☼		01/15/14 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	87		50 - 130		01/15/14 23:08	1
Dibromofluoromethane	87		68 - 140		01/15/14 23:08	1
4-Bromofluorobenzene	118		57 - 140		01/15/14 23:08	1
1,2-Dichloroethane-d4 (Surr)	78		61 - 130		01/15/14 23:08	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0696	U	0.859	0.0696	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
2-Methylnaphthalene	0.141	U	0.859	0.141	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
1-Methylnaphthalene	0.0809	U	0.859	0.0809	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Acenaphthylene	0.0516	U	0.859	0.0516	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Acenaphthene	0.0742	U	0.859	0.0742	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Fluorene	0.122	U	0.859	0.122	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Phenanthrene	0.255	U	0.859	0.255	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Anthracene	0.0660	U	0.859	0.0660	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Fluoranthene	0.160	U	0.859	0.160	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Pyrene	0.0943	U	0.859	0.0943	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Benzo[a]anthracene	0.0711	U	0.859	0.0711	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Chrysene	0.0526	U	0.859	0.0526	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Benzo[b]fluoranthene	0.0887	U	0.859	0.0887	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Benzo[k]fluoranthene	0.0768	U	0.859	0.0768	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Benzo[a]pyrene	0.0830	U	0.859	0.0830	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Indeno[1,2,3-cd]pyrene	0.180	U	0.859	0.180	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Dibenz(a,h)anthracene	0.187	U	0.859	0.187	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20
Benzo[g,h,i]perylene	0.261	U	0.859	0.261	mg/Kg	☼	01/17/14 13:18	01/22/14 22:46	20

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27B (0-2)**

**Date Collected: 01/09/14 08:55**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-24**

**Matrix: Solid**

**Percent Solids: 77.5**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	0	X	25 - 132	01/17/14 13:18	01/22/14 22:46	20
Nitrobenzene-d5	0	X	10 - 155	01/17/14 13:18	01/22/14 22:46	20
2-Fluorobiphenyl	0	X	38 - 127	01/17/14 13:18	01/22/14 22:46	20
2,4,6-Tribromophenol	0	X	10 - 148	01/17/14 13:18	01/22/14 22:46	20
Terphenyl-d14	0	X	53 - 134	01/17/14 13:18	01/22/14 22:46	20
Phenol-d5 (Surr)	0	X	27 - 123	01/17/14 13:18	01/22/14 22:46	20

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.87	U	12.8	4.87	mg/Kg	☼	01/14/14 12:54	01/14/14 19:35	1
>C12-C28	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 19:35	1
>C28-C35	5.20	U	12.8	5.20	mg/Kg	☼	01/14/14 12:54	01/14/14 19:35	1
C6-C35	9.59	U	12.8	9.59	mg/Kg	☼	01/14/14 12:54	01/14/14 19:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	97		70 - 130	01/14/14 12:54	01/14/14 19:35	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	6.99		3.23	0.299	mg/Kg	☼	01/13/14 14:19	01/14/14 09:26	1
Arsenic	16.8		1.29	0.281	mg/Kg	☼	01/13/14 14:19	01/14/14 09:26	1
Cadmium	9.85		0.323	0.0331	mg/Kg	☼	01/13/14 14:19	01/14/14 09:26	1
Lead	2420		0.645	0.135	mg/Kg	☼	01/13/14 14:19	01/14/14 09:26	1
Selenium	0.536	J	2.58	0.334	mg/Kg	☼	01/13/14 14:19	01/14/14 09:26	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	77		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: MW-27A (0-2)**

**Date Collected: 01/09/14 09:25**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-26**

**Matrix: Solid**

**Percent Solids: 78.3**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00415	J	0.0128	0.00212	mg/Kg	☼		01/15/14 23:32	1
Benzene	0.000805	U	0.00639	0.000805	mg/Kg	☼		01/15/14 23:32	1
Chlorobromomethane	0.00227	U	0.00639	0.00227	mg/Kg	☼		01/15/14 23:32	1
Bromoform	0.00175	U	0.00639	0.00175	mg/Kg	☼		01/15/14 23:32	1
Bromomethane	0.00106	U	0.0128	0.00106	mg/Kg	☼		01/15/14 23:32	1
2-Butanone (MEK)	0.00243	U	0.0128	0.00243	mg/Kg	☼		01/15/14 23:32	1
Carbon disulfide	0.000703	U	0.0128	0.000703	mg/Kg	☼		01/15/14 23:32	1
Carbon tetrachloride	0.00144	U	0.00639	0.00144	mg/Kg	☼		01/15/14 23:32	1
Dibromochloromethane	0.00120	U	0.00639	0.00120	mg/Kg	☼		01/15/14 23:32	1
Chlorobenzene	0.00123	U	0.00639	0.00123	mg/Kg	☼		01/15/14 23:32	1
Chloroethane	0.00179	U	0.0128	0.00179	mg/Kg	☼		01/15/14 23:32	1
Chloroform	0.000843	U	0.00639	0.000843	mg/Kg	☼		01/15/14 23:32	1
Chloromethane	0.00212	U	0.0128	0.00212	mg/Kg	☼		01/15/14 23:32	1
1,1-Dichloroethane	0.00111	U	0.00639	0.00111	mg/Kg	☼		01/15/14 23:32	1
1,2-Dichloroethane	0.00115	U	0.00639	0.00115	mg/Kg	☼		01/15/14 23:32	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27A (0-2)**

**Date Collected: 01/09/14 09:25**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-26**

**Matrix: Solid**

**Percent Solids: 78.3**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.00156	U	0.00639	0.00156	mg/Kg	☼		01/15/14 23:32	1
cis-1,2-Dichloroethene	0.00106	U	0.00639	0.00106	mg/Kg	☼		01/15/14 23:32	1
trans-1,2-Dichloroethene	0.00146	U	0.00639	0.00146	mg/Kg	☼		01/15/14 23:32	1
1,2-Dichloropropane	0.000907	U	0.00639	0.000907	mg/Kg	☼		01/15/14 23:32	1
cis-1,3-Dichloropropene	0.000690	U	0.00639	0.000690	mg/Kg	☼		01/15/14 23:32	1
trans-1,3-Dichloropropene	0.000741	U	0.00639	0.000741	mg/Kg	☼		01/15/14 23:32	1
Ethylbenzene	0.00130	U	0.00639	0.00130	mg/Kg	☼		01/15/14 23:32	1
2-Hexanone	0.00129	U	0.0128	0.00129	mg/Kg	☼		01/15/14 23:32	1
Methylene Chloride	0.00280	U	0.0128	0.00280	mg/Kg	☼		01/15/14 23:32	1
4-Methyl-2-pentanone (MIBK)	0.00188	U	0.0128	0.00188	mg/Kg	☼		01/15/14 23:32	1
Styrene	0.000907	U	0.00639	0.000907	mg/Kg	☼		01/15/14 23:32	1
1,1,2,2-Tetrachloroethane	0.00111	U	0.00639	0.00111	mg/Kg	☼		01/15/14 23:32	1
Tetrachloroethene	0.000907	U	0.00639	0.000907	mg/Kg	☼		01/15/14 23:32	1
Toluene	0.00176	U	0.00639	0.00176	mg/Kg	☼		01/15/14 23:32	1
1,1,1-Trichloroethane	0.000945	U	0.00639	0.000945	mg/Kg	☼		01/15/14 23:32	1
1,1,2-Trichloroethane	0.000933	U	0.00639	0.000933	mg/Kg	☼		01/15/14 23:32	1
Trichloroethene	0.00179	U	0.00639	0.00179	mg/Kg	☼		01/15/14 23:32	1
Vinyl acetate	0.00119	U	0.00639	0.00119	mg/Kg	☼		01/15/14 23:32	1
Vinyl chloride	0.00115	U	0.0128	0.00115	mg/Kg	☼		01/15/14 23:32	1
o-Xylene	0.00144	U	0.00639	0.00144	mg/Kg	☼		01/15/14 23:32	1
m-Xylene & p-Xylene	0.00194	U	0.0128	0.00194	mg/Kg	☼		01/15/14 23:32	1
Xylenes, Total	0.00144	U	0.00639	0.00144	mg/Kg	☼		01/15/14 23:32	1
Bromodichloromethane	0.000843	U	0.00639	0.000843	mg/Kg	☼		01/15/14 23:32	1
1,2-Dichloroethene, Total	0.00243	U	0.0128	0.00243	mg/Kg	☼		01/15/14 23:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		50 - 130		01/15/14 23:32	1
Dibromofluoromethane	90		68 - 140		01/15/14 23:32	1
4-Bromofluorobenzene	127		57 - 140		01/15/14 23:32	1
1,2-Dichloroethane-d4 (Surr)	81		61 - 130		01/15/14 23:32	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.0101	J	0.0424	0.00343	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
2-Methylnaphthalene	0.0146	J	0.0424	0.00696	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
1-Methylnaphthalene	0.00693	J	0.0424	0.00399	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Acenaphthylene	0.00254	U	0.0424	0.00254	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Acenaphthene	0.00366	U	0.0424	0.00366	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Fluorene	0.00600	U	0.0424	0.00600	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Phenanthrene	0.0148	J	0.0424	0.0126	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Anthracene	0.00760	J	0.0424	0.00325	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Fluoranthene	0.00790	U	0.0424	0.00790	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Pyrene	0.00465	U *	0.0424	0.00465	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Benzo[a]anthracene	0.0138	J *	0.0424	0.00351	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Chrysene	0.0361	J *	0.0424	0.00259	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Benzo[b]fluoranthene	0.00437	U *	0.0424	0.00437	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Benzo[k]fluoranthene	0.00379	U *	0.0424	0.00379	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Benzo[a]pyrene	0.00409	U *	0.0424	0.00409	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Indeno[1,2,3-cd]pyrene	0.00890	U *	0.0424	0.00890	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Dibenz(a,h)anthracene	0.00923	U *	0.0424	0.00923	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27A (0-2)**

**Date Collected: 01/09/14 09:25**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-26**

**Matrix: Solid**

**Percent Solids: 78.3**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	0.0129	U *	0.0424	0.0129	mg/Kg	☼	01/21/14 10:00	01/22/14 19:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol	76		25 - 132				01/21/14 10:00	01/22/14 19:21	1
Nitrobenzene-d5	103		10 - 155				01/21/14 10:00	01/22/14 19:21	1
2-Fluorobiphenyl	107		38 - 127				01/21/14 10:00	01/22/14 19:21	1
2,4,6-Tribromophenol	81		10 - 148				01/21/14 10:00	01/22/14 19:21	1
Terphenyl-d14	136	X *	53 - 134				01/21/14 10:00	01/22/14 19:21	1
Phenol-d5 (Surr)	98		27 - 123				01/21/14 10:00	01/22/14 19:21	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	4.85	U	12.8	4.85	mg/Kg	☼	01/14/14 12:54	01/14/14 20:09	1
>C12-C28	5.18	U	12.8	5.18	mg/Kg	☼	01/14/14 12:54	01/14/14 20:09	1
>C28-C35	5.18	U	12.8	5.18	mg/Kg	☼	01/14/14 12:54	01/14/14 20:09	1
C6-C35	9.54	U	12.8	9.54	mg/Kg	☼	01/14/14 12:54	01/14/14 20:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	95		70 - 130				01/14/14 12:54	01/14/14 20:09	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	12.0		0.296	0.0303	mg/Kg	☼	01/13/14 14:19	01/14/14 09:28	1
Lead	829		0.592	0.124	mg/Kg	☼	01/13/14 14:19	01/14/14 09:28	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	78		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: 2013-NDA-1A(2-4)**

**Date Collected: 01/09/14 10:15**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-28**

**Matrix: Solid**

**Percent Solids: 81.6**

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.00196	U	0.0204	0.00196	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1221	0.0105	U	0.0204	0.0105	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1232	0.00819	U	0.0204	0.00819	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1242	0.00152	U	0.0204	0.00152	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1248	0.00304	U	0.0204	0.00304	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1254	0.00270	U	0.0204	0.00270	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
PCB-1260	0.0165	U	0.0204	0.0165	mg/Kg	☼	01/13/14 14:23	01/15/14 11:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		58 - 164				01/13/14 14:23	01/15/14 11:52	1
DCB Decachlorobiphenyl	95		70 - 164				01/13/14 14:23	01/15/14 11:52	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18		1.0	1.0	%			01/14/14 13:52	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-NDA-1A(2-4)**

**Date Collected: 01/09/14 10:15**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-28**

**Matrix: Solid**

## General Chemistry (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82		1.0	1.0	%			01/14/14 13:52	1

**Client Sample ID: D11A (0-0.5)**

**Date Collected: 01/09/14 10:35**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-30**

**Matrix: Solid**

**Percent Solids: 72.6**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.76	J	3.41	0.316	mg/Kg	☼	01/14/14 12:46	01/15/14 13:25	1
Arsenic	27.2		1.36	0.297	mg/Kg	☼	01/14/14 12:46	01/15/14 13:25	1
Cadmium	1.77	b	0.341	0.0350	mg/Kg	☼	01/14/14 12:46	01/15/14 13:25	1
Lead	257		0.682	0.143	mg/Kg	☼	01/14/14 12:46	01/15/14 13:25	1
Selenium	0.353	U	2.73	0.353	mg/Kg	☼	01/14/14 12:46	01/15/14 13:25	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	73		1.0	1.0	%			01/15/14 15:56	1

**Client Sample ID: D12A (0-0.5)**

**Date Collected: 01/09/14 10:50**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-31**

**Matrix: Solid**

**Percent Solids: 74.6**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.9		1.25	0.273	mg/Kg	☼	01/14/14 12:46	01/15/14 13:27	1
Cadmium	0.652	b	0.313	0.0321	mg/Kg	☼	01/14/14 12:46	01/15/14 13:27	1
Lead	80.2		0.627	0.131	mg/Kg	☼	01/14/14 12:46	01/15/14 13:27	1
Selenium	0.324	U	2.51	0.324	mg/Kg	☼	01/14/14 12:46	01/15/14 13:27	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	25		1.0	1.0	%			01/15/14 15:56	1
Percent Solids	75		1.0	1.0	%			01/15/14 15:56	1

**Client Sample ID: D13A (0-0.5)**

**Date Collected: 01/09/14 11:04**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-32**

**Matrix: Solid**

**Percent Solids: 78.6**

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14.0		1.21	0.264	mg/Kg	☼	01/13/14 14:19	01/14/14 09:34	1
Cadmium	0.503		0.303	0.0311	mg/Kg	☼	01/13/14 14:19	01/14/14 09:34	1
Lead	67.3		0.606	0.127	mg/Kg	☼	01/13/14 14:19	01/14/14 09:34	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	79		1.0	1.0	%			01/13/14 09:59	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-C2L-03-(0-0.5)**

Date Collected: 01/09/14 11:26

Date Received: 01/10/14 10:31

**Lab Sample ID: 600-85318-33**

Matrix: Solid

Percent Solids: 73.9

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12.2		1.28	0.278	mg/Kg	☼	01/13/14 14:19	01/14/14 09:36	1
Cadmium	0.651		0.319	0.0327	mg/Kg	☼	01/13/14 14:19	01/14/14 09:36	1
Lead	79.5		0.638	0.134	mg/Kg	☼	01/13/14 14:19	01/14/14 09:36	1
Selenium	0.330	U	2.55	0.330	mg/Kg	☼	01/13/14 14:19	01/14/14 09:36	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	26		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	74		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: 2013-BSA-2A(0-2)**

Date Collected: 01/09/14 12:50

Date Received: 01/10/14 10:31

**Lab Sample ID: 600-85318-36**

Matrix: Solid

Percent Solids: 80.6

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	17.1		3.01	0.279	mg/Kg	☼	01/15/14 12:30	01/16/14 09:58	1
Arsenic	34.9		1.20	0.262	mg/Kg	☼	01/15/14 12:30	01/16/14 09:58	1
Cadmium	16.5		0.301	0.0309	mg/Kg	☼	01/15/14 12:30	01/16/14 09:58	1
Lead	2880		0.602	0.126	mg/Kg	☼	01/15/14 12:30	01/16/14 09:58	1
Selenium	1.07	J	2.41	0.312	mg/Kg	☼	01/15/14 12:30	01/16/14 09:58	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	81		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: 2013-AD-04 (0-0.5)**

Date Collected: 01/09/14 13:26

Date Received: 01/10/14 10:31

**Lab Sample ID: 600-85318-37**

Matrix: Solid

Percent Solids: 79.2

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.286	J	0.292	0.0300	mg/Kg	☼	01/13/14 14:19	01/14/14 09:38	1
Lead	31.9		0.585	0.123	mg/Kg	☼	01/13/14 14:19	01/14/14 09:38	1

## General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21		1.0	1.0	%			01/13/14 09:59	1
Percent Solids	79		1.0	1.0	%			01/13/14 09:59	1

**Client Sample ID: RINSE BLANK aeo**

Date Collected: 01/09/14 08:30

Date Received: 01/10/14 10:31

**Lab Sample ID: 600-85318-40**

Matrix: Water

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.0149		0.0100	0.00227	mg/L			01/11/14 18:27	1
Benzene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:27	1
Chlorobromomethane	0.000810	U	0.00500	0.000810	mg/L			01/11/14 18:27	1
Bromoform	0.000770	U	0.00500	0.000770	mg/L			01/11/14 18:27	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: RINSE BLANK aeo**

**Lab Sample ID: 600-85318-40**

**Date Collected: 01/09/14 08:30**

**Matrix: Water**

**Date Received: 01/10/14 10:31**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.00215	U	0.0100	0.00215	mg/L			01/11/14 18:27	1
2-Butanone (MEK)	0.00157	U	0.0100	0.00157	mg/L			01/11/14 18:27	1
Carbon disulfide	0.00170	U	0.00500	0.00170	mg/L			01/11/14 18:27	1
Carbon tetrachloride	0.000920	U	0.00500	0.000920	mg/L			01/11/14 18:27	1
Dibromochloromethane	0.000920	U	0.00500	0.000920	mg/L			01/11/14 18:27	1
Chlorobenzene	0.000820	U	0.00500	0.000820	mg/L			01/11/14 18:27	1
Chloroethane	0.00173	U	0.0100	0.00173	mg/L			01/11/14 18:27	1
Chloroform	0.000820	U	0.00500	0.000820	mg/L			01/11/14 18:27	1
Chloromethane	0.000850	U	0.0100	0.000850	mg/L			01/11/14 18:27	1
1,1-Dichloroethane	0.000500	U	0.00500	0.000500	mg/L			01/11/14 18:27	1
1,2-Dichloroethane	0.00101	U	0.00500	0.00101	mg/L			01/11/14 18:27	1
1,1-Dichloroethene	0.000760	U	0.00500	0.000760	mg/L			01/11/14 18:27	1
cis-1,2-Dichloroethene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:27	1
trans-1,2-Dichloroethene	0.000880	U	0.00500	0.000880	mg/L			01/11/14 18:27	1
1,2-Dichloropropane	0.00141	U	0.00500	0.00141	mg/L			01/11/14 18:27	1
cis-1,3-Dichloropropene	0.000970	U	0.00500	0.000970	mg/L			01/11/14 18:27	1
trans-1,3-Dichloropropene	0.000590	U	0.00500	0.000590	mg/L			01/11/14 18:27	1
Ethylbenzene	0.00129	U	0.00500	0.00129	mg/L			01/11/14 18:27	1
2-Hexanone	0.00142	U	0.0100	0.00142	mg/L			01/11/14 18:27	1
Methylene Chloride	0.00143	U	0.0100	0.00143	mg/L			01/11/14 18:27	1
4-Methyl-2-pentanone (MIBK)	0.00111	U	0.0100	0.00111	mg/L			01/11/14 18:27	1
Styrene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 18:27	1
1,1,2,2-Tetrachloroethane	0.000800	U	0.00500	0.000800	mg/L			01/11/14 18:27	1
Tetrachloroethene	0.00124	U	0.00500	0.00124	mg/L			01/11/14 18:27	1
<b>Toluene</b>	<b>0.00227</b>	<b>J</b>	0.00500	0.000550	mg/L			01/11/14 18:27	1
1,1,1-Trichloroethane	0.000980	U	0.00500	0.000980	mg/L			01/11/14 18:27	1
1,1,2-Trichloroethane	0.000530	U	0.00500	0.000530	mg/L			01/11/14 18:27	1
Trichloroethene	0.00158	U	0.00500	0.00158	mg/L			01/11/14 18:27	1
Vinyl acetate	0.000600	U	0.0100	0.000600	mg/L			01/11/14 18:27	1
Vinyl chloride	0.000850	U	0.00500	0.000850	mg/L			01/11/14 18:27	1
o-Xylene	0.000930	U	0.00500	0.000930	mg/L			01/11/14 18:27	1
m-Xylene & p-Xylene	0.00126	U	0.0100	0.00126	mg/L			01/11/14 18:27	1
Xylenes, Total	0.00198	U	0.00500	0.00198	mg/L			01/11/14 18:27	1
Bromodichloromethane	0.000760	U	0.00500	0.000760	mg/L			01/11/14 18:27	1
1,2-Dichloroethene, Total	0.000840	U	0.0100	0.000840	mg/L			01/11/14 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		01/11/14 18:27	1
Dibromofluoromethane	87		62 - 130		01/11/14 18:27	1
4-Bromofluorobenzene	103		67 - 139		01/11/14 18:27	1
1,2-Dichloroethane-d4 (Surr)	85		50 - 134		01/11/14 18:27	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.000120	U	0.000500	0.000120	mg/L		01/14/14 16:09	01/15/14 01:25	1
Acenaphthylene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 16:09	01/15/14 01:25	1
Benzo[g,h,i]perylene	0.000350	U	0.000500	0.000350	mg/L		01/14/14 16:09	01/15/14 01:25	1
Phenanthrene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 16:09	01/15/14 01:25	1
Benzo[k]fluoranthene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 16:09	01/15/14 01:25	1
Benzo[a]pyrene	0.000130	U	0.000500	0.000130	mg/L		01/14/14 16:09	01/15/14 01:25	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: RINSE BLANK aeo**

**Lab Sample ID: 600-85318-40**

**Date Collected: 01/09/14 08:30**

**Matrix: Water**

**Date Received: 01/10/14 10:31**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	0.000440	U	0.000500	0.000440	mg/L		01/14/14 16:09	01/15/14 01:25	1
2-Methylnaphthalene	0.000140	U	0.000500	0.000140	mg/L		01/14/14 16:09	01/15/14 01:25	1
Pyrene	0.000330	U	0.000500	0.000330	mg/L		01/14/14 16:09	01/15/14 01:25	1
Dibenz(a,h)anthracene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 16:09	01/15/14 01:25	1
Naphthalene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 16:09	01/15/14 01:25	1
Fluoranthene	0.000310	U	0.000500	0.000310	mg/L		01/14/14 16:09	01/15/14 01:25	1
Benzo[a]anthracene	0.000250	U	0.000500	0.000250	mg/L		01/14/14 16:09	01/15/14 01:25	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 16:09	01/15/14 01:25	1
Chrysene	0.000240	U	0.000500	0.000240	mg/L		01/14/14 16:09	01/15/14 01:25	1
Acenaphthene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 16:09	01/15/14 01:25	1
Benzo[b]fluoranthene	0.000180	U	0.000500	0.000180	mg/L		01/14/14 16:09	01/15/14 01:25	1
1-Methylnaphthalene	0.000190	U	0.000500	0.000190	mg/L		01/14/14 16:09	01/15/14 01:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	91		33 - 141	01/14/14 16:09	01/15/14 01:25	1
Nitrobenzene-d5	80		47 - 120	01/14/14 16:09	01/15/14 01:25	1
2-Fluorophenol	38		18 - 120	01/14/14 16:09	01/15/14 01:25	1
2-Fluorobiphenyl	82		43 - 120	01/14/14 16:09	01/15/14 01:25	1
2,4,6-Tribromophenol	76		44 - 123	01/14/14 16:09	01/15/14 01:25	1
Phenol-d5 (Surr)	27		12 - 128	01/14/14 16:09	01/15/14 01:25	1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	0.809	U	4.87	0.809	mg/L		01/14/14 15:16	01/15/14 04:47	1
>C12-C28	0.935	U	4.87	0.935	mg/L		01/14/14 15:16	01/15/14 04:47	1
>C28-C35	0.935	U	4.87	0.935	mg/L		01/14/14 15:16	01/15/14 04:47	1
C6-C35	1.52	U	4.87	1.52	mg/L		01/14/14 15:16	01/15/14 04:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	90		70 - 130	01/14/14 15:16	01/15/14 04:47	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		01/13/14 09:01	01/15/14 12:54	1
Arsenic	0.00328	U ^	0.0100	0.00328	mg/L		01/13/14 09:01	01/15/14 12:54	1
Cadmium	0.000350	U ^	0.00500	0.000350	mg/L		01/13/14 09:01	01/15/14 12:54	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/13/14 09:01	01/15/14 12:54	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		01/13/14 09:01	01/15/14 12:54	1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 600-85318-41**

**Date Collected: 01/09/14 00:00**

**Matrix: Water**

**Date Received: 01/10/14 10:31**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00227	U	0.0100	0.00227	mg/L			01/11/14 16:54	1
Benzene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 16:54	1
Chlorobromomethane	0.000810	U	0.00500	0.000810	mg/L			01/11/14 16:54	1
Bromoform	0.000770	U	0.00500	0.000770	mg/L			01/11/14 16:54	1
Bromomethane	0.00215	U	0.0100	0.00215	mg/L			01/11/14 16:54	1
2-Butanone (MEK)	0.00157	U	0.0100	0.00157	mg/L			01/11/14 16:54	1

TestAmerica Houston



# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 600-85318-41**

**Date Collected: 01/09/14 00:00**

**Matrix: Water**

**Date Received: 01/10/14 10:31**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	0.00170	U	0.00500	0.00170	mg/L			01/11/14 16:54	1
Carbon tetrachloride	0.000920	U	0.00500	0.000920	mg/L			01/11/14 16:54	1
Dibromochloromethane	0.000920	U	0.00500	0.000920	mg/L			01/11/14 16:54	1
Chlorobenzene	0.000820	U	0.00500	0.000820	mg/L			01/11/14 16:54	1
Chloroethane	0.00173	U	0.0100	0.00173	mg/L			01/11/14 16:54	1
Chloroform	0.000820	U	0.00500	0.000820	mg/L			01/11/14 16:54	1
Chloromethane	0.000850	U	0.0100	0.000850	mg/L			01/11/14 16:54	1
1,1-Dichloroethane	0.000500	U	0.00500	0.000500	mg/L			01/11/14 16:54	1
1,2-Dichloroethane	0.00101	U	0.00500	0.00101	mg/L			01/11/14 16:54	1
1,1-Dichloroethene	0.000760	U	0.00500	0.000760	mg/L			01/11/14 16:54	1
cis-1,2-Dichloroethene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 16:54	1
trans-1,2-Dichloroethene	0.000880	U	0.00500	0.000880	mg/L			01/11/14 16:54	1
1,2-Dichloropropane	0.00141	U	0.00500	0.00141	mg/L			01/11/14 16:54	1
cis-1,3-Dichloropropene	0.000970	U	0.00500	0.000970	mg/L			01/11/14 16:54	1
trans-1,3-Dichloropropene	0.000590	U	0.00500	0.000590	mg/L			01/11/14 16:54	1
Ethylbenzene	0.00129	U	0.00500	0.00129	mg/L			01/11/14 16:54	1
2-Hexanone	0.00142	U	0.0100	0.00142	mg/L			01/11/14 16:54	1
Methylene Chloride	0.00143	U	0.0100	0.00143	mg/L			01/11/14 16:54	1
4-Methyl-2-pentanone (MIBK)	0.00111	U	0.0100	0.00111	mg/L			01/11/14 16:54	1
Styrene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 16:54	1
1,1,2,2-Tetrachloroethane	0.000800	U	0.00500	0.000800	mg/L			01/11/14 16:54	1
Tetrachloroethene	0.00124	U	0.00500	0.00124	mg/L			01/11/14 16:54	1
Toluene	0.000550	U	0.00500	0.000550	mg/L			01/11/14 16:54	1
1,1,1-Trichloroethane	0.000980	U	0.00500	0.000980	mg/L			01/11/14 16:54	1
1,1,2-Trichloroethane	0.000530	U	0.00500	0.000530	mg/L			01/11/14 16:54	1
Trichloroethene	0.00158	U	0.00500	0.00158	mg/L			01/11/14 16:54	1
Vinyl acetate	0.000600	U	0.0100	0.000600	mg/L			01/11/14 16:54	1
Vinyl chloride	0.000850	U	0.00500	0.000850	mg/L			01/11/14 16:54	1
o-Xylene	0.000930	U	0.00500	0.000930	mg/L			01/11/14 16:54	1
m-Xylene & p-Xylene	0.00126	U	0.0100	0.00126	mg/L			01/11/14 16:54	1
Xylenes, Total	0.00198	U	0.00500	0.00198	mg/L			01/11/14 16:54	1
Bromodichloromethane	0.000760	U	0.00500	0.000760	mg/L			01/11/14 16:54	1
1,2-Dichloroethene, Total	0.000840	U	0.0100	0.000840	mg/L			01/11/14 16:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		01/11/14 16:54	1
Dibromofluoromethane	88		62 - 130		01/11/14 16:54	1
4-Bromofluorobenzene	104		67 - 139		01/11/14 16:54	1
1,2-Dichloroethane-d4 (Surr)	84		50 - 134		01/11/14 16:54	1

TestAmerica Houston

# Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
b	The compound was found in the blank and sample

### GC/MS Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
X	Surrogate is outside control limits
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
*	ISTD response or retention time outside acceptable limits
N	MS, MSD: Spike recovery is outside acceptance limits.
b	The compound was found in the blank and sample

### GC Semi VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
U	Analyte was not detected at or above the SDL.
N	MS, MSD: Spike recovery is outside acceptance 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.
N	RPD of the MS and MSD exceeds the control limits
b	The compound was found in the blank and sample
F	Duplicate RPD exceeds the control limit
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## 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
CFL	Contains Free Liquid
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

TestAmerica Houston

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (50-130)	DBFM (68-140)	BFB (57-140)	12DCE (61-130)
600-85318-1	2013-FFTA-01 (0.25-2)	76	81	104	85
600-85318-3	2013-FFTA-03 (18-19)	88	85	132	90
600-85318-4	2013-MB-3 (0.75-1.25)	93	93	133	95
600-85318-7	2013-MB-5 (0.5-5)	91	87	138	90
600-85318-8	2013-MB-5 (10-12)	96	101	101	98
600-85318-11	2013-MB-4 (0.83-1.33)	86	92	99	86
600-85318-14	MW-27D (0.5-2)	91	88	102	77
600-85318-16	MW-27C (0-2)	91	89	113	81
600-85318-24	MW-27B (0-2)	87	87	118	78
600-85318-26	MW-27A (0-2)	91	90	127	81
LCS 600-125013/3	Lab Control Sample	67	76	89	75
LCS 600-125071/3	Lab Control Sample	78	70	119	70
LCS 600-125242/4	Lab Control Sample	88	78	87	77
MB 600-125013/4	Method Blank	68	83	97	85
MB 600-125071/4	Method Blank	89	82	122	76
MB 600-125242/3	Method Blank	69	72	97	70

### Surrogate Legend

TOL = Toluene-d8 (Surr)  
DBFM = Dibromofluoromethane  
BFB = 4-Bromofluorobenzene  
12DCE = 1,2-Dichloroethane-d4 (Surr)

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (70-130)	DBFM (62-130)	BFB (67-139)	12DCE (50-134)
600-85318-22	FIELD BLANK	100	88	104	85
600-85318-40	RINSE BLANK aeo	99	87	103	85
600-85318-41	TRIP BLANK	99	88	104	84
LCS 600-124815/3	Lab Control Sample	99	89	99	78
MB 600-124815/4	Method Blank	101	88	101	81

### Surrogate Legend

TOL = Toluene-d8 (Surr)  
DBFM = Dibromofluoromethane  
BFB = 4-Bromofluorobenzene  
12DCE = 1,2-Dichloroethane-d4 (Surr)

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (38-127)	2FP (25-132)	NBZ (10-155)	PHL (27-123)	TPH (53-134)	TBP (10-148)
600-85318-1	2013-FFTA-01 (0.25-2)	0 X	0 X	0 X	0 X	0 X	0 X
600-85318-3	2013-FFTA-03 (18-19)	108	51	82	6 X	117	34
600-85318-7	2013-MB-5 (0.5-5)	112	126	19	114	128	98

TestAmerica Houston

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (38-127)	2FP (25-132)	NBZ (10-155)	PHL (27-123)	TPH (53-134)	TBP (10-148)
600-85318-8	2013-MB-5 (10-12)	0 X	0 X	0 X	0 X	0 X	0 X
600-85318-14	MW-27D (0.5-2)	92	55	18	121	121	59
600-85318-16	MW-27C (0-2)	114	123	110	111	125	103
600-85318-24	MW-27B (0-2)	0 X	0 X	0 X	0 X	0 X	0 X
600-85318-26	MW-27A (0-2)	107	76	103	98	136 X *	81
600-85318-26 MS	MW-27A (0-2)	88	82	89	92	121 *	89
600-85318-26 MSD	MW-27A (0-2)	97	76	91	96	128 *	106
LCS 600-124982/2-A	Lab Control Sample	120	122	127	120	128	106
LCS 600-125220/2-A	Lab Control Sample	77	78	76	81	79	70
LCS 600-125453/2-A	Lab Control Sample	92	81	90	98	115	80
MB 600-124982/1-A	Method Blank	114	113	117	111	124	37
MB 600-125220/1-A	Method Blank	68	72	69	64	74	30
MB 600-125453/1-A	Method Blank	106	87	97	99	120	59

### Surrogate Legend

FBP = 2-Fluorobiphenyl  
2FP = 2-Fluorophenol  
NBZ = Nitrobenzene-d5  
PHL = Phenol-d5 (Surr)  
TPH = Terphenyl-d14  
TBP = 2,4,6-Tribromophenol

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TPH (33-141)	NBZ (47-120)	2FP (18-120)	FBP (43-120)	TBP (44-123)	PHL (12-128)
600-85318-40	RINSE BLANK aeo	91	80	38	82	76	27
LCS 600-124914/2-A	Lab Control Sample	100	99	74	95	97	66
MB 600-124914/1-A	Method Blank	90	84	64	84	64	51

### Surrogate Legend

TPH = Terphenyl-d14  
NBZ = Nitrobenzene-d5  
2FP = 2-Fluorophenol  
FBP = 2-Fluorobiphenyl  
TBP = 2,4,6-Tribromophenol  
PHL = Phenol-d5 (Surr)

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (58-164)	DCB2 (70-164)
600-85318-28	2013-NDA-1A(2-4)	86	95
600-85318-A-36-B MS	600-85318-A-36-B MS	93	121
600-85318-A-36-C MSD	600-85318-A-36-C MSD	88	115
LCS 600-124838/2-A	Lab Control Sample	83	106

TestAmerica Houston

# Surrogate Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX2 (58-164)	DCB2 (70-164)
MB 600-124838/1-A	Method Blank	91	110

#### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Matrix: Solid

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (70-130)
600-85318-1	2013-FFTA-01 (0.25-2)	88
600-85318-3	2013-FFTA-03 (18-19)	96
600-85318-7	2013-MB-5 (0.5-5)	81
600-85318-8	2013-MB-5 (10-12)	218 X
600-85318-14	MW-27D (0.5-2)	97
600-85318-16	MW-27C (0-2)	100
600-85318-24	MW-27B (0-2)	97
600-85318-26	MW-27A (0-2)	95
LCS 600-124920/2-A	Lab Control Sample	109
MB 600-124920/1-A	Method Blank	93

#### Surrogate Legend

OTPH = o-Terphenyl

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (70-130)
600-85318-40	RINSE BLANK aeo	90
LCS 600-124950/2-A	Lab Control Sample	116
MB 600-124950/1-A	Method Blank	102

#### Surrogate Legend

OTPH = o-Terphenyl

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: MB 600-124815/4

Matrix: Water

Analysis Batch: 124815

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00227	U	0.0100	0.00227	mg/L			01/11/14 11:55	1
Benzene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 11:55	1
Chlorobromomethane	0.000810	U	0.00500	0.000810	mg/L			01/11/14 11:55	1
Bromoform	0.000770	U	0.00500	0.000770	mg/L			01/11/14 11:55	1
Bromomethane	0.00215	U	0.0100	0.00215	mg/L			01/11/14 11:55	1
2-Butanone (MEK)	0.00157	U	0.0100	0.00157	mg/L			01/11/14 11:55	1
Carbon disulfide	0.00170	U	0.00500	0.00170	mg/L			01/11/14 11:55	1
Carbon tetrachloride	0.000920	U	0.00500	0.000920	mg/L			01/11/14 11:55	1
Dibromochloromethane	0.000920	U	0.00500	0.000920	mg/L			01/11/14 11:55	1
Chlorobenzene	0.000820	U	0.00500	0.000820	mg/L			01/11/14 11:55	1
Chloroethane	0.00173	U	0.0100	0.00173	mg/L			01/11/14 11:55	1
Chloroform	0.000820	U	0.00500	0.000820	mg/L			01/11/14 11:55	1
Chloromethane	0.000850	U	0.0100	0.000850	mg/L			01/11/14 11:55	1
1,1-Dichloroethane	0.000500	U	0.00500	0.000500	mg/L			01/11/14 11:55	1
1,2-Dichloroethane	0.00101	U	0.00500	0.00101	mg/L			01/11/14 11:55	1
1,1-Dichloroethene	0.000760	U	0.00500	0.000760	mg/L			01/11/14 11:55	1
cis-1,2-Dichloroethene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 11:55	1
trans-1,2-Dichloroethene	0.000880	U	0.00500	0.000880	mg/L			01/11/14 11:55	1
1,2-Dichloropropane	0.00141	U	0.00500	0.00141	mg/L			01/11/14 11:55	1
cis-1,3-Dichloropropene	0.000970	U	0.00500	0.000970	mg/L			01/11/14 11:55	1
trans-1,3-Dichloropropene	0.000590	U	0.00500	0.000590	mg/L			01/11/14 11:55	1
Ethylbenzene	0.00129	U	0.00500	0.00129	mg/L			01/11/14 11:55	1
2-Hexanone	0.00142	U	0.0100	0.00142	mg/L			01/11/14 11:55	1
Methylene Chloride	0.00143	U	0.0100	0.00143	mg/L			01/11/14 11:55	1
4-Methyl-2-pentanone (MIBK)	0.00111	U	0.0100	0.00111	mg/L			01/11/14 11:55	1
Styrene	0.000560	U	0.00500	0.000560	mg/L			01/11/14 11:55	1
1,1,2,2-Tetrachloroethane	0.000800	U	0.00500	0.000800	mg/L			01/11/14 11:55	1
Tetrachloroethene	0.00124	U	0.00500	0.00124	mg/L			01/11/14 11:55	1
Toluene	0.000550	U	0.00500	0.000550	mg/L			01/11/14 11:55	1
1,1,1-Trichloroethane	0.000980	U	0.00500	0.000980	mg/L			01/11/14 11:55	1
1,1,2-Trichloroethane	0.000530	U	0.00500	0.000530	mg/L			01/11/14 11:55	1
Trichloroethene	0.00158	U	0.00500	0.00158	mg/L			01/11/14 11:55	1
Vinyl acetate	0.000600	U	0.0100	0.000600	mg/L			01/11/14 11:55	1
Vinyl chloride	0.000850	U	0.00500	0.000850	mg/L			01/11/14 11:55	1
o-Xylene	0.000930	U	0.00500	0.000930	mg/L			01/11/14 11:55	1
m-Xylene & p-Xylene	0.00126	U	0.0100	0.00126	mg/L			01/11/14 11:55	1
Xylenes, Total	0.00198	U	0.00500	0.00198	mg/L			01/11/14 11:55	1
Bromodichloromethane	0.000760	U	0.00500	0.000760	mg/L			01/11/14 11:55	1
1,2-Dichloroethene, Total	0.000840	U	0.0100	0.000840	mg/L			01/11/14 11:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		01/11/14 11:55	1
Dibromofluoromethane	88		62 - 130		01/11/14 11:55	1
4-Bromofluorobenzene	101		67 - 139		01/11/14 11:55	1
1,2-Dichloroethane-d4 (Surr)	81		50 - 134		01/11/14 11:55	1

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCS 600-124815/3

Matrix: Water

Analysis Batch: 124815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.100	0.08884		mg/L		89	28 - 152
Benzene	0.0500	0.04907		mg/L		98	69 - 131
Chlorobromomethane	0.0500	0.05147		mg/L		103	60 - 141
Bromoform	0.0500	0.04099		mg/L		82	39 - 149
Bromomethane	0.0500	0.05474		mg/L		109	52 - 146
2-Butanone (MEK)	0.100	0.07429		mg/L		74	59 - 133
Carbon disulfide	0.0500	0.04410		mg/L		88	32 - 177
Carbon tetrachloride	0.0500	0.03961		mg/L		79	59 - 147
Dibromochloromethane	0.0500	0.04380		mg/L		88	58 - 132
Chlorobenzene	0.0500	0.04960		mg/L		99	60 - 136
Chloroethane	0.0500	0.05008		mg/L		100	56 - 144
Chloroform	0.0500	0.04577		mg/L		92	69 - 128
Chloromethane	0.0500	0.05169		mg/L		103	32 - 151
1,1-Dichloroethane	0.0500	0.04748		mg/L		95	66 - 126
1,2-Dichloroethane	0.0500	0.04184		mg/L		84	66 - 140
1,1-Dichloroethene	0.0500	0.04236		mg/L		85	59 - 145
cis-1,2-Dichloroethene	0.0500	0.04841		mg/L		97	69 - 129
trans-1,2-Dichloroethene	0.0500	0.04686		mg/L		94	70 - 132
1,2-Dichloropropane	0.0500	0.04924		mg/L		98	72 - 135
cis-1,3-Dichloropropene	0.0500	0.04840		mg/L		97	60 - 135
trans-1,3-Dichloropropene	0.0500	0.04567		mg/L		91	63 - 133
Ethylbenzene	0.0500	0.04788		mg/L		96	68 - 128
2-Hexanone	0.100	0.07234		mg/L		72	51 - 130
Methylene Chloride	0.0500	0.04580		mg/L		92	62 - 134
4-Methyl-2-pentanone (MIBK)	0.100	0.07388		mg/L		74	56 - 142
Styrene	0.0500	0.04940		mg/L		99	68 - 133
1,1,2,2-Tetrachloroethane	0.0500	0.03996		mg/L		80	68 - 134
Tetrachloroethene	0.0500	0.04275		mg/L		85	70 - 150
Toluene	0.0500	0.04826		mg/L		97	67 - 130
1,1,1-Trichloroethane	0.0500	0.04239		mg/L		85	65 - 142
1,1,2-Trichloroethane	0.0500	0.04439		mg/L		89	68 - 130
Trichloroethene	0.0500	0.04626		mg/L		93	68 - 130
Vinyl acetate	0.100	0.09050		mg/L		90	58 - 175
Vinyl chloride	0.0500	0.03610		mg/L		72	47 - 146
o-Xylene	0.0500	0.04777		mg/L		96	68 - 134
m-Xylene & p-Xylene	0.0500	0.04800		mg/L		96	67 - 132
Xylenes, Total	0.100	0.09577		mg/L		96	68 - 132
Bromodichloromethane	0.0500	0.04626		mg/L		93	73 - 130
1,2-Dichloroethene, Total	0.100	0.09527		mg/L		95	65 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		70 - 130
Dibromofluoromethane	89		62 - 130
4-Bromofluorobenzene	99		67 - 139
1,2-Dichloroethane-d4 (Surr)	78		50 - 134

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: MB 600-125013/4

Matrix: Solid

Analysis Batch: 125013

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00166	U	0.0100	0.00166	mg/Kg			01/14/14 12:26	1
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			01/14/14 12:26	1
Chlorobromomethane	0.00178	U	0.00500	0.00178	mg/Kg			01/14/14 12:26	1
Bromoform	0.00137	U	0.00500	0.00137	mg/Kg			01/14/14 12:26	1
Bromomethane	0.000830	U	0.0100	0.000830	mg/Kg			01/14/14 12:26	1
2-Butanone (MEK)	0.00190	U	0.0100	0.00190	mg/Kg			01/14/14 12:26	1
Carbon disulfide	0.000550	U	0.0100	0.000550	mg/Kg			01/14/14 12:26	1
Carbon tetrachloride	0.00113	U	0.00500	0.00113	mg/Kg			01/14/14 12:26	1
Dibromochloromethane	0.000940	U	0.00500	0.000940	mg/Kg			01/14/14 12:26	1
Chlorobenzene	0.000960	U	0.00500	0.000960	mg/Kg			01/14/14 12:26	1
Chloroethane	0.00140	U	0.0100	0.00140	mg/Kg			01/14/14 12:26	1
Chloroform	0.000660	U	0.00500	0.000660	mg/Kg			01/14/14 12:26	1
Chloromethane	0.00166	U	0.0100	0.00166	mg/Kg			01/14/14 12:26	1
1,1-Dichloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/14/14 12:26	1
1,2-Dichloroethane	0.000900	U	0.00500	0.000900	mg/Kg			01/14/14 12:26	1
1,1-Dichloroethene	0.00122	U	0.00500	0.00122	mg/Kg			01/14/14 12:26	1
cis-1,2-Dichloroethene	0.000830	U	0.00500	0.000830	mg/Kg			01/14/14 12:26	1
trans-1,2-Dichloroethene	0.00114	U	0.00500	0.00114	mg/Kg			01/14/14 12:26	1
1,2-Dichloropropane	0.000710	U	0.00500	0.000710	mg/Kg			01/14/14 12:26	1
cis-1,3-Dichloropropene	0.000540	U	0.00500	0.000540	mg/Kg			01/14/14 12:26	1
trans-1,3-Dichloropropene	0.000580	U	0.00500	0.000580	mg/Kg			01/14/14 12:26	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			01/14/14 12:26	1
2-Hexanone	0.00101	U	0.0100	0.00101	mg/Kg			01/14/14 12:26	1
Methylene Chloride	0.00219	U	0.0100	0.00219	mg/Kg			01/14/14 12:26	1
4-Methyl-2-pentanone (MIBK)	0.00147	U	0.0100	0.00147	mg/Kg			01/14/14 12:26	1
Styrene	0.000710	U	0.00500	0.000710	mg/Kg			01/14/14 12:26	1
1,1,2,2-Tetrachloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/14/14 12:26	1
Tetrachloroethene	0.000710	U	0.00500	0.000710	mg/Kg			01/14/14 12:26	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			01/14/14 12:26	1
1,1,1-Trichloroethane	0.000740	U	0.00500	0.000740	mg/Kg			01/14/14 12:26	1
1,1,2-Trichloroethane	0.000730	U	0.00500	0.000730	mg/Kg			01/14/14 12:26	1
Trichloroethene	0.00140	U	0.00500	0.00140	mg/Kg			01/14/14 12:26	1
Vinyl acetate	0.000930	U	0.00500	0.000930	mg/Kg			01/14/14 12:26	1
Vinyl chloride	0.000900	U	0.0100	0.000900	mg/Kg			01/14/14 12:26	1
o-Xylene	0.00113	U	0.00500	0.00113	mg/Kg			01/14/14 12:26	1
m-Xylene & p-Xylene	0.00152	U	0.0100	0.00152	mg/Kg			01/14/14 12:26	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			01/14/14 12:26	1
Bromodichloromethane	0.000660	U	0.00500	0.000660	mg/Kg			01/14/14 12:26	1
1,2-Dichloroethene, Total	0.00190	U	0.0100	0.00190	mg/Kg			01/14/14 12:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	68		50 - 130		01/14/14 12:26	1
Dibromofluoromethane	83		68 - 140		01/14/14 12:26	1
4-Bromofluorobenzene	97		57 - 140		01/14/14 12:26	1
1,2-Dichloroethane-d4 (Surr)	85		61 - 130		01/14/14 12:26	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCS 600-125013/3

Matrix: Solid

Analysis Batch: 125013

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.100	0.1349		mg/Kg		135	44 - 136
Benzene	0.0500	0.05464		mg/Kg		109	66 - 128
Chlorobromomethane	0.0500	0.04995		mg/Kg		100	60 - 140
Bromoform	0.0500	0.04483		mg/Kg		90	50 - 130
Bromomethane	0.0500	0.04230		mg/Kg		85	28 - 164
2-Butanone (MEK)	0.100	0.1193		mg/Kg		119	42 - 186
Carbon disulfide	0.0500	0.05146		mg/Kg		103	53 - 176
Carbon tetrachloride	0.0500	0.04599		mg/Kg		92	63 - 132
Dibromochloromethane	0.0500	0.04198		mg/Kg		84	63 - 125
Chlorobenzene	0.0500	0.04316		mg/Kg		86	67 - 126
Chloroethane	0.0500	0.04744		mg/Kg		95	30 - 136
Chloroform	0.0500	0.05352		mg/Kg		107	67 - 126
Chloromethane	0.0500	0.04545		mg/Kg		91	21 - 153
1,1-Dichloroethane	0.0500	0.05436		mg/Kg		109	64 - 130
1,2-Dichloroethane	0.0500	0.05906		mg/Kg		118	61 - 135
1,1-Dichloroethene	0.0500	0.04876		mg/Kg		98	40 - 157
cis-1,2-Dichloroethene	0.0500	0.05171		mg/Kg		103	62 - 130
trans-1,2-Dichloroethene	0.0500	0.05011		mg/Kg		100	65 - 130
1,2-Dichloropropane	0.0500	0.05673		mg/Kg		113	71 - 122
cis-1,3-Dichloropropene	0.0500	0.04731		mg/Kg		95	66 - 129
trans-1,3-Dichloropropene	0.0500	0.04686		mg/Kg		94	66 - 134
Ethylbenzene	0.0500	0.04270		mg/Kg		85	64 - 127
2-Hexanone	0.100	0.1074		mg/Kg		107	52 - 142
Methylene Chloride	0.0500	0.06166		mg/Kg		123	48 - 144
4-Methyl-2-pentanone (MIBK)	0.100	0.1237		mg/Kg		124	52 - 146
Styrene	0.0500	0.04396		mg/Kg		88	63 - 128
1,1,2,2-Tetrachloroethane	0.0500	0.04987		mg/Kg		100	59 - 134
Tetrachloroethene	0.0500	0.03543		mg/Kg		71	69 - 125
Toluene	0.0500	0.04311		mg/Kg		86	69 - 125
1,1,1-Trichloroethane	0.0500	0.05149		mg/Kg		103	70 - 127
1,1,2-Trichloroethane	0.0500	0.04353		mg/Kg		87	67 - 124
Trichloroethene	0.0500	0.04676		mg/Kg		94	70 - 136
Vinyl acetate	0.100	0.1183		mg/Kg		118	54 - 136
Vinyl chloride	0.0500	0.04434		mg/Kg		89	28 - 159
o-Xylene	0.0500	0.04513		mg/Kg		90	64 - 132
m-Xylene & p-Xylene	0.0500	0.04322		mg/Kg		86	65 - 128
Xylenes, Total	0.100	0.08835		mg/Kg		88	65 - 129
Bromodichloromethane	0.0500	0.05528		mg/Kg		111	68 - 121
1,2-Dichloroethene, Total	0.100	0.1018		mg/Kg		102	62 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	67		50 - 130
Dibromofluoromethane	76		68 - 140
4-Bromofluorobenzene	89		57 - 140
1,2-Dichloroethane-d4 (Surr)	75		61 - 130

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: MB 600-125071/4  
Matrix: Solid  
Analysis Batch: 125071

Client Sample ID: Method Blank  
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00166	U	0.0100	0.00166	mg/Kg			01/15/14 16:12	1
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			01/15/14 16:12	1
Chlorobromomethane	0.00178	U	0.00500	0.00178	mg/Kg			01/15/14 16:12	1
Bromoform	0.00137	U	0.00500	0.00137	mg/Kg			01/15/14 16:12	1
Bromomethane	0.000830	U	0.0100	0.000830	mg/Kg			01/15/14 16:12	1
2-Butanone (MEK)	0.00190	U	0.0100	0.00190	mg/Kg			01/15/14 16:12	1
Carbon disulfide	0.000550	U	0.0100	0.000550	mg/Kg			01/15/14 16:12	1
Carbon tetrachloride	0.00113	U	0.00500	0.00113	mg/Kg			01/15/14 16:12	1
Dibromochloromethane	0.000940	U	0.00500	0.000940	mg/Kg			01/15/14 16:12	1
Chlorobenzene	0.000960	U	0.00500	0.000960	mg/Kg			01/15/14 16:12	1
Chloroethane	0.00140	U	0.0100	0.00140	mg/Kg			01/15/14 16:12	1
Chloroform	0.000660	U	0.00500	0.000660	mg/Kg			01/15/14 16:12	1
Chloromethane	0.00166	U	0.0100	0.00166	mg/Kg			01/15/14 16:12	1
1,1-Dichloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/15/14 16:12	1
1,2-Dichloroethane	0.000900	U	0.00500	0.000900	mg/Kg			01/15/14 16:12	1
1,1-Dichloroethene	0.00122	U	0.00500	0.00122	mg/Kg			01/15/14 16:12	1
cis-1,2-Dichloroethene	0.000830	U	0.00500	0.000830	mg/Kg			01/15/14 16:12	1
trans-1,2-Dichloroethene	0.00114	U	0.00500	0.00114	mg/Kg			01/15/14 16:12	1
1,2-Dichloropropane	0.000710	U	0.00500	0.000710	mg/Kg			01/15/14 16:12	1
cis-1,3-Dichloropropene	0.000540	U	0.00500	0.000540	mg/Kg			01/15/14 16:12	1
trans-1,3-Dichloropropene	0.000580	U	0.00500	0.000580	mg/Kg			01/15/14 16:12	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			01/15/14 16:12	1
2-Hexanone	0.00101	U	0.0100	0.00101	mg/Kg			01/15/14 16:12	1
Methylene Chloride	0.00219	U	0.0100	0.00219	mg/Kg			01/15/14 16:12	1
4-Methyl-2-pentanone (MIBK)	0.00147	U	0.0100	0.00147	mg/Kg			01/15/14 16:12	1
Styrene	0.000710	U	0.00500	0.000710	mg/Kg			01/15/14 16:12	1
1,1,2,2-Tetrachloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/15/14 16:12	1
Tetrachloroethene	0.000710	U	0.00500	0.000710	mg/Kg			01/15/14 16:12	1
Toluene	0.00138	U	0.00500	0.00138	mg/Kg			01/15/14 16:12	1
1,1,1-Trichloroethane	0.000740	U	0.00500	0.000740	mg/Kg			01/15/14 16:12	1
1,1,2-Trichloroethane	0.000730	U	0.00500	0.000730	mg/Kg			01/15/14 16:12	1
Trichloroethene	0.00140	U	0.00500	0.00140	mg/Kg			01/15/14 16:12	1
Vinyl acetate	0.000930	U	0.00500	0.000930	mg/Kg			01/15/14 16:12	1
Vinyl chloride	0.000900	U	0.0100	0.000900	mg/Kg			01/15/14 16:12	1
o-Xylene	0.00113	U	0.00500	0.00113	mg/Kg			01/15/14 16:12	1
m-Xylene & p-Xylene	0.00152	U	0.0100	0.00152	mg/Kg			01/15/14 16:12	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			01/15/14 16:12	1
Bromodichloromethane	0.000660	U	0.00500	0.000660	mg/Kg			01/15/14 16:12	1
1,2-Dichloroethene, Total	0.00190	U	0.0100	0.00190	mg/Kg			01/15/14 16:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		50 - 130		01/15/14 16:12	1
Dibromofluoromethane	82		68 - 140		01/15/14 16:12	1
4-Bromofluorobenzene	122		57 - 140		01/15/14 16:12	1
1,2-Dichloroethane-d4 (Surr)	76		61 - 130		01/15/14 16:12	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCS 600-125071/3

Matrix: Solid

Analysis Batch: 125071

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.100	0.1180		mg/Kg		118	44 - 136
Benzene	0.0500	0.04344		mg/Kg		87	66 - 128
Chlorobromomethane	0.0500	0.04129		mg/Kg		83	60 - 140
Bromoform	0.0500	0.05685		mg/Kg		114	50 - 130
Bromomethane	0.0500	0.03218		mg/Kg		64	28 - 164
2-Butanone (MEK)	0.100	0.1145		mg/Kg		114	42 - 186
Carbon disulfide	0.0500	0.04092		mg/Kg		82	53 - 176
Carbon tetrachloride	0.0500	0.04017		mg/Kg		80	63 - 132
Dibromochloromethane	0.0500	0.04628		mg/Kg		93	63 - 125
Chlorobenzene	0.0500	0.04449		mg/Kg		89	67 - 126
Chloroethane	0.0500	0.03442		mg/Kg		69	30 - 136
Chloroform	0.0500	0.04355		mg/Kg		87	67 - 126
Chloromethane	0.0500	0.03238		mg/Kg		65	21 - 153
1,1-Dichloroethane	0.0500	0.04422		mg/Kg		88	64 - 130
1,2-Dichloroethane	0.0500	0.04731		mg/Kg		95	61 - 135
1,1-Dichloroethene	0.0500	0.03993		mg/Kg		80	40 - 157
cis-1,2-Dichloroethene	0.0500	0.04296		mg/Kg		86	62 - 130
trans-1,2-Dichloroethene	0.0500	0.04015		mg/Kg		80	65 - 130
1,2-Dichloropropane	0.0500	0.04563		mg/Kg		91	71 - 122
cis-1,3-Dichloropropene	0.0500	0.04845		mg/Kg		97	66 - 129
trans-1,3-Dichloropropene	0.0500	0.04720		mg/Kg		94	66 - 134
Ethylbenzene	0.0500	0.04333		mg/Kg		87	64 - 127
2-Hexanone	0.100	0.1164		mg/Kg		116	52 - 142
Methylene Chloride	0.0500	0.04047		mg/Kg		81	48 - 144
4-Methyl-2-pentanone (MIBK)	0.100	0.1096		mg/Kg		110	52 - 146
Styrene	0.0500	0.04389		mg/Kg		88	63 - 128
1,1,2,2-Tetrachloroethane	0.0500	0.05551		mg/Kg		111	59 - 134
Tetrachloroethene	0.0500	0.04267		mg/Kg		85	69 - 125
Toluene	0.0500	0.04362		mg/Kg		87	69 - 125
1,1,1-Trichloroethane	0.0500	0.04211		mg/Kg		84	70 - 127
1,1,2-Trichloroethane	0.0500	0.04796		mg/Kg		96	67 - 124
Trichloroethene	0.0500	0.04069		mg/Kg		81	70 - 136
Vinyl acetate	0.100	0.09814		mg/Kg		98	54 - 136
Vinyl chloride	0.0500	0.03312		mg/Kg		66	28 - 159
o-Xylene	0.0500	0.04516		mg/Kg		90	64 - 132
m-Xylene & p-Xylene	0.0500	0.04343		mg/Kg		87	65 - 128
Xylenes, Total	0.100	0.08859		mg/Kg		89	65 - 129
Bromodichloromethane	0.0500	0.04857		mg/Kg		97	68 - 121
1,2-Dichloroethene, Total	0.100	0.08311		mg/Kg		83	62 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	78		50 - 130
Dibromofluoromethane	70		68 - 140
4-Bromofluorobenzene	119		57 - 140
1,2-Dichloroethane-d4 (Surr)	70		61 - 130

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: MB 600-125242/3

Matrix: Solid

Analysis Batch: 125242

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.00166	U	0.0100	0.00166	mg/Kg			01/17/14 09:21	1
Benzene	0.000630	U	0.00500	0.000630	mg/Kg			01/17/14 09:21	1
Chlorobromomethane	0.00178	U	0.00500	0.00178	mg/Kg			01/17/14 09:21	1
Bromoform	0.00137	U	0.00500	0.00137	mg/Kg			01/17/14 09:21	1
Bromomethane	0.000830	U	0.0100	0.000830	mg/Kg			01/17/14 09:21	1
2-Butanone (MEK)	0.00190	U	0.0100	0.00190	mg/Kg			01/17/14 09:21	1
Carbon disulfide	0.000550	U	0.0100	0.000550	mg/Kg			01/17/14 09:21	1
Carbon tetrachloride	0.00113	U	0.00500	0.00113	mg/Kg			01/17/14 09:21	1
Dibromochloromethane	0.000940	U	0.00500	0.000940	mg/Kg			01/17/14 09:21	1
Chlorobenzene	0.000960	U	0.00500	0.000960	mg/Kg			01/17/14 09:21	1
Chloroethane	0.00140	U	0.0100	0.00140	mg/Kg			01/17/14 09:21	1
Chloroform	0.000660	U	0.00500	0.000660	mg/Kg			01/17/14 09:21	1
Chloromethane	0.00166	U	0.0100	0.00166	mg/Kg			01/17/14 09:21	1
1,1-Dichloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/17/14 09:21	1
1,2-Dichloroethane	0.000900	U	0.00500	0.000900	mg/Kg			01/17/14 09:21	1
1,1-Dichloroethene	0.00122	U	0.00500	0.00122	mg/Kg			01/17/14 09:21	1
cis-1,2-Dichloroethene	0.000830	U	0.00500	0.000830	mg/Kg			01/17/14 09:21	1
trans-1,2-Dichloroethene	0.00114	U	0.00500	0.00114	mg/Kg			01/17/14 09:21	1
1,2-Dichloropropane	0.000710	U	0.00500	0.000710	mg/Kg			01/17/14 09:21	1
cis-1,3-Dichloropropene	0.000540	U	0.00500	0.000540	mg/Kg			01/17/14 09:21	1
trans-1,3-Dichloropropene	0.000580	U	0.00500	0.000580	mg/Kg			01/17/14 09:21	1
Ethylbenzene	0.00102	U	0.00500	0.00102	mg/Kg			01/17/14 09:21	1
2-Hexanone	0.00101	U	0.0100	0.00101	mg/Kg			01/17/14 09:21	1
Methylene Chloride	0.00219	U	0.0100	0.00219	mg/Kg			01/17/14 09:21	1
4-Methyl-2-pentanone (MIBK)	0.00147	U	0.0100	0.00147	mg/Kg			01/17/14 09:21	1
Styrene	0.000710	U	0.00500	0.000710	mg/Kg			01/17/14 09:21	1
1,1,2,2-Tetrachloroethane	0.000870	U	0.00500	0.000870	mg/Kg			01/17/14 09:21	1
Tetrachloroethene	0.000710	U	0.00500	0.000710	mg/Kg			01/17/14 09:21	1
Toluene	0.002338	J	0.00500	0.00138	mg/Kg			01/17/14 09:21	1
1,1,1-Trichloroethane	0.000740	U	0.00500	0.000740	mg/Kg			01/17/14 09:21	1
1,1,2-Trichloroethane	0.000730	U	0.00500	0.000730	mg/Kg			01/17/14 09:21	1
Trichloroethene	0.00140	U	0.00500	0.00140	mg/Kg			01/17/14 09:21	1
Vinyl acetate	0.000930	U	0.00500	0.000930	mg/Kg			01/17/14 09:21	1
Vinyl chloride	0.000900	U	0.0100	0.000900	mg/Kg			01/17/14 09:21	1
o-Xylene	0.00113	U	0.00500	0.00113	mg/Kg			01/17/14 09:21	1
m-Xylene & p-Xylene	0.00152	U	0.0100	0.00152	mg/Kg			01/17/14 09:21	1
Xylenes, Total	0.00113	U	0.00500	0.00113	mg/Kg			01/17/14 09:21	1
Bromodichloromethane	0.000660	U	0.00500	0.000660	mg/Kg			01/17/14 09:21	1
1,2-Dichloroethene, Total	0.00190	U	0.0100	0.00190	mg/Kg			01/17/14 09:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	69		50 - 130		01/17/14 09:21	1
Dibromofluoromethane	72		68 - 140		01/17/14 09:21	1
4-Bromofluorobenzene	97		57 - 140		01/17/14 09:21	1
1,2-Dichloroethane-d4 (Surr)	70		61 - 130		01/17/14 09:21	1

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCS 600-125242/4

Matrix: Solid

Analysis Batch: 125242

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	0.100	0.08969		mg/Kg		90	44 - 136
Benzene	0.0500	0.04565		mg/Kg		91	66 - 128
Chlorobromomethane	0.0500	0.04215		mg/Kg		84	60 - 140
Bromoform	0.0500	0.05340		mg/Kg		107	50 - 130
Bromomethane	0.0500	0.03961		mg/Kg		79	28 - 164
2-Butanone (MEK)	0.100	0.08400		mg/Kg		84	42 - 186
Carbon disulfide	0.0500	0.04260		mg/Kg		85	53 - 176
Carbon tetrachloride	0.0500	0.04011		mg/Kg		80	63 - 132
Dibromochloromethane	0.0500	0.04838		mg/Kg		97	63 - 125
Chlorobenzene	0.0500	0.04898		mg/Kg		98	67 - 126
Chloroethane	0.0500	0.04154		mg/Kg		83	30 - 136
Chloroform	0.0500	0.04591		mg/Kg		92	67 - 126
Chloromethane	0.0500	0.03629		mg/Kg		73	21 - 153
1,1-Dichloroethane	0.0500	0.04617		mg/Kg		92	64 - 130
1,2-Dichloroethane	0.0500	0.04697		mg/Kg		94	61 - 135
1,1-Dichloroethene	0.0500	0.04233		mg/Kg		85	40 - 157
cis-1,2-Dichloroethene	0.0500	0.04427		mg/Kg		89	62 - 130
trans-1,2-Dichloroethene	0.0500	0.04145		mg/Kg		83	65 - 130
1,2-Dichloropropane	0.0500	0.04721		mg/Kg		94	71 - 122
cis-1,3-Dichloropropene	0.0500	0.05391		mg/Kg		108	66 - 129
trans-1,3-Dichloropropene	0.0500	0.04994		mg/Kg		100	66 - 134
Ethylbenzene	0.0500	0.04874		mg/Kg		97	64 - 127
2-Hexanone	0.100	0.09630		mg/Kg		96	52 - 142
Methylene Chloride	0.0500	0.04452		mg/Kg		89	48 - 144
4-Methyl-2-pentanone (MIBK)	0.100	0.08713		mg/Kg		87	52 - 146
Styrene	0.0500	0.04818		mg/Kg		96	63 - 128
1,1,2,2-Tetrachloroethane	0.0500	0.05092		mg/Kg		102	59 - 134
Tetrachloroethene	0.0500	0.04189		mg/Kg		84	69 - 125
Toluene	0.0500	0.05054		mg/Kg		101	69 - 125
1,1,1-Trichloroethane	0.0500	0.04297		mg/Kg		86	70 - 127
1,1,2-Trichloroethane	0.0500	0.04746		mg/Kg		95	67 - 124
Trichloroethene	0.0500	0.04189		mg/Kg		84	70 - 136
Vinyl acetate	0.100	0.08864		mg/Kg		89	54 - 136
Vinyl chloride	0.0500	0.03688		mg/Kg		74	28 - 159
o-Xylene	0.0500	0.05039		mg/Kg		101	64 - 132
m-Xylene & p-Xylene	0.0500	0.04839		mg/Kg		97	65 - 128
Xylenes, Total	0.100	0.09878		mg/Kg		99	65 - 129
Bromodichloromethane	0.0500	0.04363		mg/Kg		87	68 - 121
1,2-Dichloroethene, Total	0.100	0.08572		mg/Kg		86	62 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	88		50 - 130
Dibromofluoromethane	78		68 - 140
4-Bromofluorobenzene	87		57 - 140
1,2-Dichloroethane-d4 (Surr)	77		61 - 130

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-124914/1-A

Matrix: Water

Analysis Batch: 125073

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124914

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.000120	U	0.000500	0.000120	mg/L		01/14/14 11:33	01/14/14 19:18	1
Acenaphthylene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 11:33	01/14/14 19:18	1
Benzo[g,h,i]perylene	0.000350	U	0.000500	0.000350	mg/L		01/14/14 11:33	01/14/14 19:18	1
Phenanthrene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 11:33	01/14/14 19:18	1
Benzo[k]fluoranthene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 11:33	01/14/14 19:18	1
Benzo[a]pyrene	0.000130	U	0.000500	0.000130	mg/L		01/14/14 11:33	01/14/14 19:18	1
Anthracene	0.000440	U	0.000500	0.000440	mg/L		01/14/14 11:33	01/14/14 19:18	1
2-Methylnaphthalene	0.000140	U	0.000500	0.000140	mg/L		01/14/14 11:33	01/14/14 19:18	1
Pyrene	0.000330	U	0.000500	0.000330	mg/L		01/14/14 11:33	01/14/14 19:18	1
Dibenz(a,h)anthracene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 11:33	01/14/14 19:18	1
Naphthalene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 11:33	01/14/14 19:18	1
Fluoranthene	0.000310	U	0.000500	0.000310	mg/L		01/14/14 11:33	01/14/14 19:18	1
Benzo[a]anthracene	0.000250	U	0.000500	0.000250	mg/L		01/14/14 11:33	01/14/14 19:18	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.000500	0.000290	mg/L		01/14/14 11:33	01/14/14 19:18	1
Chrysene	0.000240	U	0.000500	0.000240	mg/L		01/14/14 11:33	01/14/14 19:18	1
Acenaphthene	0.000160	U	0.000500	0.000160	mg/L		01/14/14 11:33	01/14/14 19:18	1
Benzo[b]fluoranthene	0.000180	U	0.000500	0.000180	mg/L		01/14/14 11:33	01/14/14 19:18	1
1-Methylnaphthalene	0.000190	U	0.000500	0.000190	mg/L		01/14/14 11:33	01/14/14 19:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	84		47 - 120	01/14/14 11:33	01/14/14 19:18	1
2-Fluorophenol	64		18 - 120	01/14/14 11:33	01/14/14 19:18	1
2-Fluorobiphenyl	84		43 - 120	01/14/14 11:33	01/14/14 19:18	1
Terphenyl-d14	90		33 - 141	01/14/14 11:33	01/14/14 19:18	1
2,4,6-Tribromophenol	64		44 - 123	01/14/14 11:33	01/14/14 19:18	1
Phenol-d5 (Surr)	51		12 - 128	01/14/14 11:33	01/14/14 19:18	1

Lab Sample ID: LCS 600-124914/2-A

Matrix: Water

Analysis Batch: 125073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124914

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	0.00800	0.006367		mg/L		80	48 - 127
Acenaphthylene	0.00800	0.006226		mg/L		78	35 - 135
Benzo[g,h,i]perylene	0.00800	0.006708		mg/L		84	46 - 133
Phenanthrene	0.00800	0.006020		mg/L		75	52 - 121
Benzo[k]fluoranthene	0.00800	0.006078		mg/L		76	46 - 130
Benzo[a]pyrene	0.00800	0.007103		mg/L		89	50 - 124
Anthracene	0.00800	0.006701		mg/L		84	53 - 124
2-Methylnaphthalene	0.00800	0.006153		mg/L		77	40 - 121
Pyrene	0.00800	0.006628		mg/L		83	49 - 121
Dibenz(a,h)anthracene	0.00800	0.006705		mg/L		84	42 - 134
Naphthalene	0.00800	0.006255		mg/L		78	39 - 120
Fluoranthene	0.00800	0.006808		mg/L		85	53 - 127
Benzo[a]anthracene	0.00800	0.007000		mg/L		88	53 - 122
Indeno[1,2,3-cd]pyrene	0.00800	0.006413		mg/L		80	45 - 124
Chrysene	0.00800	0.006745		mg/L		84	49 - 124
Acenaphthene	0.00800	0.006037		mg/L		75	47 - 145

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-124914/2-A

Matrix: Water

Analysis Batch: 125073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124914

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	0.00800	0.007535		mg/L		94	53 - 131
1-Methylnaphthalene	0.00800	0.006093		mg/L		76	45 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	99		47 - 120
2-Fluorophenol	74		18 - 120
2-Fluorobiphenyl	95		43 - 120
Terphenyl-d14	100		33 - 141
2,4,6-Tribromophenol	97		44 - 123
Phenol-d5 (Surr)	66		12 - 128

Lab Sample ID: MB 600-124982/1-A

Matrix: Solid

Analysis Batch: 125404

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124982

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.00467	U	0.0330	0.00467	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Acenaphthylene	0.00198	U	0.0330	0.00198	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Benzo[g,h,i]perylene	0.0100	U	0.0330	0.0100	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Phenanthrene	0.00979	U	0.0330	0.00979	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Benzo[k]fluoranthene	0.00295	U	0.0330	0.00295	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Benzo[a]pyrene	0.00318	U	0.0330	0.00318	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Anthracene	0.00253	U	0.0330	0.00253	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
2-Methylnaphthalene	0.00542	U	0.0330	0.00542	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Pyrene	0.00362	U	0.0330	0.00362	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Dibenz(a,h)anthracene	0.00718	U	0.0330	0.00718	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Naphthalene	0.00267	U	0.0330	0.00267	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Fluoranthene	0.00615	U	0.0330	0.00615	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Benzo[a]anthracene	0.00273	U	0.0330	0.00273	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Indeno[1,2,3-cd]pyrene	0.00692	U	0.0330	0.00692	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Chrysene	0.00202	U	0.0330	0.00202	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Acenaphthene	0.00285	U	0.0330	0.00285	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
Benzo[b]fluoranthene	0.00340	U	0.0330	0.00340	mg/Kg		01/15/14 08:14	01/17/14 11:37	1
1-Methylnaphthalene	0.00310	U	0.0330	0.00310	mg/Kg		01/15/14 08:14	01/17/14 11:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	117		10 - 155	01/15/14 08:14	01/17/14 11:37	1
2-Fluorophenol	113		25 - 132	01/15/14 08:14	01/17/14 11:37	1
2-Fluorobiphenyl	114		38 - 127	01/15/14 08:14	01/17/14 11:37	1
Terphenyl-d14	124		53 - 134	01/15/14 08:14	01/17/14 11:37	1
2,4,6-Tribromophenol	37		10 - 148	01/15/14 08:14	01/17/14 11:37	1
Phenol-d5 (Surr)	111		27 - 123	01/15/14 08:14	01/17/14 11:37	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-124982/2-A

Matrix: Solid

Analysis Batch: 125404

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124982

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	0.665	0.7878		mg/Kg		118	52 - 130
Acenaphthylene	0.665	0.7906		mg/Kg		119	57 - 130
Benzo[g,h,i]perylene	0.665	0.8150		mg/Kg		123	58 - 150
Phenanthrene	0.665	0.7950		mg/Kg		120	57 - 130
Benzo[k]fluoranthene	0.665	0.8866		mg/Kg		133	56 - 136
Benzo[a]pyrene	0.665	0.8663		mg/Kg		130	59 - 130
Anthracene	0.665	0.8143		mg/Kg		122	58 - 130
2-Methylnaphthalene	0.665	0.7985		mg/Kg		120	51 - 130
Pyrene	0.665	0.8251		mg/Kg		124	60 - 135
Dibenz(a,h)anthracene	0.665	0.7815		mg/Kg		118	58 - 138
Naphthalene	0.665	0.7566		mg/Kg		114	59 - 130
Fluoranthene	0.665	0.8355		mg/Kg		126	63 - 130
Benzo[a]anthracene	0.665	0.8417		mg/Kg		127	61 - 132
Indeno[1,2,3-cd]pyrene	0.665	0.7055		mg/Kg		106	56 - 150
Chrysene	0.665	0.8494		mg/Kg		128	64 - 130
Acenaphthene	0.665	0.7836		mg/Kg		118	58 - 130
Benzo[b]fluoranthene	0.665	0.8438		mg/Kg		127	54 - 130
1-Methylnaphthalene	0.665	0.7705		mg/Kg		116	51 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	127		10 - 155
2-Fluorophenol	122		25 - 132
2-Fluorobiphenyl	120		38 - 127
Terphenyl-d14	128		53 - 134
2,4,6-Tribromophenol	106		10 - 148
Phenol-d5 (Surr)	120		27 - 123

Lab Sample ID: MB 600-125220/1-A

Matrix: Solid

Analysis Batch: 125471

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125220

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzidine	0.0180	U	0.167	0.0180	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzyl alcohol	0.0117	U	0.0333	0.0117	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Bis(2-chloroethoxy)methane	0.00284	U	0.0333	0.00284	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Bis(2-chloroethyl)ether	0.00330	U	0.0333	0.00330	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
bis (2-Chloroisopropyl) ether	0.0177	U	0.0333	0.0177	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Bis(2-ethylhexyl) phthalate	0.0107	U	0.133	0.0107	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Bromophenyl phenyl ether	0.00568	U	0.0333	0.00568	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Butyl benzyl phthalate	0.01363	J	0.133	0.0124	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Carbazole	0.00624	U	0.0333	0.00624	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Chloroaniline	0.0116	U	0.0333	0.0116	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Chloro-3-methylphenol	0.0312	U	0.0333	0.0312	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Chloronaphthalene	0.00242	U	0.0333	0.00242	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Chlorophenol	0.00394	U	0.0333	0.00394	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Chlorophenyl phenyl ether	0.00360	U	0.0333	0.00360	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Dibenzofuran	0.00356	U	0.0333	0.00356	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
1,2-Dichlorobenzene	0.00604	U	0.0333	0.00604	mg/Kg		01/17/14 13:18	01/20/14 19:49	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-125220/1-A

Matrix: Solid

Analysis Batch: 125471

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125220

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	0.00308	U	0.0333	0.00308	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
1,4-Dichlorobenzene	0.00450	U	0.0333	0.00450	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
3,3'-Dichlorobenzidine	0.0203	U	0.0333	0.0203	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4-Dichlorophenol	0.00774	U	0.0333	0.00774	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Diethyl phthalate	0.09509	J	0.133	0.0169	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4-Dimethylphenol	0.0172	U	0.0333	0.0172	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Dimethyl phthalate	0.00978	U	0.133	0.00978	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Di-n-butyl phthalate	0.02540	J	0.133	0.00518	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4,6-Dinitro-2-methylphenol	0.00996	U	0.0333	0.00996	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4-Dinitrophenol	0.00944	U	0.200	0.00944	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4-Dinitrotoluene	0.00722	U	0.0333	0.00722	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,6-Dinitrotoluene	0.00590	U	0.0333	0.00590	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Di-n-octyl phthalate	0.00380	U	0.133	0.00380	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Hexachlorobenzene	0.00304	U	0.0333	0.00304	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Hexachlorobutadiene	0.00384	U	0.0333	0.00384	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Hexachlorocyclopentadiene	0.00922	U	0.0333	0.00922	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Hexachloroethane	0.00462	U	0.0333	0.00462	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Isophorone	0.00200	U	0.0333	0.00200	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Methylphenol	0.00646	U	0.0333	0.00646	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
3 & 4 Methylphenol	0.00558	U	0.0667	0.00558	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Nitroaniline	0.00978	U	0.0333	0.00978	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
3-Nitroaniline	0.0143	U	0.0333	0.0143	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Nitroaniline	0.0223	U	0.0333	0.0223	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Nitrobenzene	0.00592	U	0.0333	0.00592	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Nitrophenol	0.00778	U	0.0333	0.00778	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
4-Nitrophenol	0.0102	U	0.0333	0.0102	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
N-Nitrosodimethylamine	0.00838	U	0.0333	0.00838	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
N-Nitrosodi-n-propylamine	0.00444	U	0.0333	0.00444	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
N-Nitrosodiphenylamine	0.00378	U	0.0333	0.00378	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Pentachlorophenol	0.00800	U	0.334	0.00800	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Phenol	0.00848	U	0.0333	0.00848	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
1,2,4-Trichlorobenzene	0.00420	U	0.0333	0.00420	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4,5-Trichlorophenol	0.0200	U	0.0333	0.0200	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2,4,6-Trichlorophenol	0.00536	U	0.0333	0.00536	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Fluorene	0.00472	U	0.0333	0.00472	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Acenaphthylene	0.00200	U	0.0333	0.00200	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzo[g,h,i]perylene	0.0101	U	0.0333	0.0101	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Phenanthrene	0.00990	U	0.0333	0.00990	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzo[k]fluoranthene	0.00298	U	0.0333	0.00298	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzo[a]pyrene	0.00322	U	0.0333	0.00322	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Anthracene	0.00256	U	0.0333	0.00256	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
2-Methylnaphthalene	0.00548	U	0.0333	0.00548	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Pyrene	0.00366	U	0.0333	0.00366	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Dibenz(a,h)anthracene	0.00726	U	0.0333	0.00726	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Naphthalene	0.00270	U	0.0333	0.00270	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Fluoranthene	0.00622	U	0.0333	0.00622	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzo[a]anthracene	0.00276	U	0.0333	0.00276	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Indeno[1,2,3-cd]pyrene	0.00700	U	0.0333	0.00700	mg/Kg		01/17/14 13:18	01/20/14 19:49	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-125220/1-A

Matrix: Solid

Analysis Batch: 125471

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125220

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.00204	U	0.0333	0.00204	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Acenaphthene	0.00288	U	0.0333	0.00288	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
Benzo[b]fluoranthene	0.00344	U	0.0333	0.00344	mg/Kg		01/17/14 13:18	01/20/14 19:49	1
1-Methylnaphthalene	0.00314	U	0.0333	0.00314	mg/Kg		01/17/14 13:18	01/20/14 19:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	69		10 - 155	01/17/14 13:18	01/20/14 19:49	1
2-Fluorophenol	72		25 - 132	01/17/14 13:18	01/20/14 19:49	1
2-Fluorobiphenyl	68		38 - 127	01/17/14 13:18	01/20/14 19:49	1
Terphenyl-d14	74		53 - 134	01/17/14 13:18	01/20/14 19:49	1
2,4,6-Tribromophenol	30		10 - 148	01/17/14 13:18	01/20/14 19:49	1
Phenol-d5 (Surr)	64		27 - 123	01/17/14 13:18	01/20/14 19:49	1

Lab Sample ID: LCS 600-125220/2-A

Matrix: Solid

Analysis Batch: 125471

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125220

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzidine	3.33	1.296		mg/Kg		39	10 - 145
Benzyl alcohol	0.667	0.6353		mg/Kg		95	31 - 137
Bis(2-chloroethoxy)methane	0.667	0.5066		mg/Kg		76	42 - 139
Bis(2-chloroethyl)ether	0.667	0.5044		mg/Kg		76	68 - 130
bis (2-Chloroisopropyl) ether	0.667	0.4332		mg/Kg		65	63 - 142
Bis(2-ethylhexyl) phthalate	0.667	0.6094		mg/Kg		91	68 - 133
4-Bromophenyl phenyl ether	0.667	0.4829		mg/Kg		72	69 - 130
Butyl benzyl phthalate	0.667	0.5929		mg/Kg		89	70 - 130
Carbazole	0.667	0.5852		mg/Kg		88	61 - 149
4-Chloroaniline	0.667	0.4143		mg/Kg		62	18 - 130
4-Chloro-3-methylphenol	0.667	0.5005		mg/Kg		75	51 - 130
2-Chloronaphthalene	0.667	0.5161		mg/Kg		77	62 - 130
2-Chlorophenol	0.667	0.5282		mg/Kg		79	63 - 130
4-Chlorophenyl phenyl ether	0.667	0.5002		mg/Kg		75	46 - 130
Dibenzofuran	0.667	0.5231		mg/Kg		78	51 - 130
1,2-Dichlorobenzene	0.667	0.4887		mg/Kg		73	55 - 130
1,3-Dichlorobenzene	0.667	0.4753		mg/Kg		71	57 - 130
1,4-Dichlorobenzene	0.667	0.4531		mg/Kg		68	58 - 130
3,3'-Dichlorobenzidine	0.667	0.5417		mg/Kg		81	10 - 150
2,4-Dichlorophenol	0.667	0.5026		mg/Kg		75	38 - 130
Diethyl phthalate	0.667	0.5703		mg/Kg		86	59 - 130
2,4-Dimethylphenol	0.667	0.4974		mg/Kg		75	55 - 130
Dimethyl phthalate	0.667	0.5248		mg/Kg		79	68 - 130
Di-n-butyl phthalate	0.667	0.5866		mg/Kg		88	70 - 130
4,6-Dinitro-2-methylphenol	1.33	1.047		mg/Kg		79	10 - 130
2,4-Dinitrophenol	1.33	0.9387		mg/Kg		70	24 - 143
2,4-Dinitrotoluene	0.667	0.5026		mg/Kg		75	51 - 150
2,6-Dinitrotoluene	0.667	0.5138		mg/Kg		77	47 - 130
Di-n-octyl phthalate	0.667	0.5830		mg/Kg		87	68 - 131
Hexachlorobenzene	0.667	0.4537		mg/Kg		68	66 - 130

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-125220/2-A

Matrix: Solid

Analysis Batch: 125471

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125220

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	0.667	0.4490		mg/Kg		67	62 - 130
Hexachlorocyclopentadiene	0.667	0.4301		mg/Kg		65	24 - 130
Hexachloroethane	0.667	0.4859		mg/Kg		73	68 - 130
Isophorone	0.667	0.5099		mg/Kg		76	67 - 130
2-Methylphenol	0.667	0.5347		mg/Kg		80	57 - 130
3 & 4 Methylphenol	0.667	0.5593		mg/Kg		84	46 - 130
2-Nitroaniline	0.667	0.5117		mg/Kg		77	67 - 150
3-Nitroaniline	0.667	0.4892		mg/Kg		73	24 - 150
4-Nitroaniline	0.667	0.5003		mg/Kg		75	45 - 160
Nitrobenzene	0.667	0.4802		mg/Kg		72	60 - 130
2-Nitrophenol	0.667	0.5539		mg/Kg		83	54 - 130
4-Nitrophenol	1.33	1.015		mg/Kg		76	36 - 149
N-Nitrosodimethylamine	0.667	0.4881		mg/Kg		73	54 - 130
N-Nitrosodi-n-propylamine	0.667	0.5284		mg/Kg		79	70 - 130
N-Nitrosodiphenylamine	0.667	0.5135		mg/Kg		77	70 - 130
Pentachlorophenol	1.33	0.8711		mg/Kg		65	43 - 130
Phenol	0.667	0.4584		mg/Kg		69	56 - 130
1,2,4-Trichlorobenzene	0.667	0.4477		mg/Kg		67	55 - 130
2,4,5-Trichlorophenol	0.667	0.5451		mg/Kg		82	56 - 130
2,4,6-Trichlorophenol	0.667	0.5172		mg/Kg		78	45 - 130
Fluorene	0.667	0.5171		mg/Kg		78	52 - 130
Acenaphthylene	0.667	0.5289		mg/Kg		79	57 - 130
Benzo[g,h,i]perylene	0.667	0.5746		mg/Kg		86	58 - 150
Phenanthrene	0.667	0.5032		mg/Kg		75	57 - 130
Benzo[k]fluoranthene	0.667	0.5204		mg/Kg		78	56 - 136
Benzo[a]pyrene	0.667	0.5856		mg/Kg		88	59 - 130
Anthracene	0.667	0.5160		mg/Kg		77	58 - 130
2-Methylnaphthalene	0.667	0.4902		mg/Kg		74	51 - 130
Pyrene	0.667	0.5191		mg/Kg		78	60 - 135
Dibenz(a,h)anthracene	0.667	0.5362		mg/Kg		80	58 - 138
Naphthalene	0.667	0.4776		mg/Kg		72	59 - 130
Fluoranthene	0.667	0.5172		mg/Kg		78	63 - 130
Benzo[a]anthracene	0.667	0.5639		mg/Kg		85	61 - 132
Indeno[1,2,3-cd]pyrene	0.667	0.5431		mg/Kg		81	56 - 150
Chrysene	0.667	0.5256		mg/Kg		79	64 - 130
Acenaphthene	0.667	0.5160		mg/Kg		77	58 - 130
Benzo[b]fluoranthene	0.667	0.5166		mg/Kg		77	54 - 130
1-Methylnaphthalene	0.667	0.5040		mg/Kg		76	51 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	76		10 - 155
2-Fluorophenol	78		25 - 132
2-Fluorobiphenyl	77		38 - 127
Terphenyl-d14	79		53 - 134
2,4,6-Tribromophenol	70		10 - 148
Phenol-d5 (Surr)	81		27 - 123

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-125453/1-A

Matrix: Solid

Analysis Batch: 125638

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125453

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	0.00472	U	0.0333	0.00472	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Acenaphthylene	0.00200	U	0.0333	0.00200	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Benzo[g,h,i]perylene	0.0101	U	0.0333	0.0101	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Phenanthrene	0.00990	U	0.0333	0.00990	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Benzo[k]fluoranthene	0.00298	U	0.0333	0.00298	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Benzo[a]pyrene	0.00322	U	0.0333	0.00322	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Anthracene	0.00256	U	0.0333	0.00256	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
2-Methylnaphthalene	0.00548	U	0.0333	0.00548	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Pyrene	0.00366	U	0.0333	0.00366	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Dibenz(a,h)anthracene	0.00726	U	0.0333	0.00726	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Naphthalene	0.00270	U	0.0333	0.00270	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Fluoranthene	0.00622	U	0.0333	0.00622	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Benzo[a]anthracene	0.00276	U	0.0333	0.00276	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Indeno[1,2,3-cd]pyrene	0.00700	U	0.0333	0.00700	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Chrysene	0.00204	U	0.0333	0.00204	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Acenaphthene	0.00288	U	0.0333	0.00288	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
Benzo[b]fluoranthene	0.00344	U	0.0333	0.00344	mg/Kg		01/21/14 10:00	01/22/14 16:21	1
1-Methylnaphthalene	0.00314	U	0.0333	0.00314	mg/Kg		01/21/14 10:00	01/22/14 16:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	97		10 - 155	01/21/14 10:00	01/22/14 16:21	1
2-Fluorophenol	87		25 - 132	01/21/14 10:00	01/22/14 16:21	1
2-Fluorobiphenyl	106		38 - 127	01/21/14 10:00	01/22/14 16:21	1
Terphenyl-d14	120		53 - 134	01/21/14 10:00	01/22/14 16:21	1
2,4,6-Tribromophenol	59		10 - 148	01/21/14 10:00	01/22/14 16:21	1
Phenol-d5 (Surr)	99		27 - 123	01/21/14 10:00	01/22/14 16:21	1

Lab Sample ID: LCS 600-125453/2-A

Matrix: Solid

Analysis Batch: 125638

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	0.667	0.6609		mg/Kg		99	52 - 130
Acenaphthylene	0.667	0.6722		mg/Kg		101	57 - 130
Benzo[g,h,i]perylene	0.667	0.8601		mg/Kg		129	58 - 150
Phenanthrene	0.667	0.7300		mg/Kg		110	57 - 130
Benzo[k]fluoranthene	0.667	0.7323		mg/Kg		110	56 - 136
Benzo[a]pyrene	0.667	0.8382		mg/Kg		126	59 - 130
Anthracene	0.667	0.7352		mg/Kg		110	58 - 130
2-Methylnaphthalene	0.667	0.6159		mg/Kg		92	51 - 130
Pyrene	0.667	0.7807		mg/Kg		117	60 - 135
Dibenz(a,h)anthracene	0.667	0.8409		mg/Kg		126	58 - 138
Naphthalene	0.667	0.6248		mg/Kg		94	59 - 130
Fluoranthene	0.667	0.7761		mg/Kg		116	63 - 130
Benzo[a]anthracene	0.667	0.8108		mg/Kg		122	61 - 132
Indeno[1,2,3-cd]pyrene	0.667	0.7687		mg/Kg		115	56 - 150
Chrysene	0.667	0.7738		mg/Kg		116	64 - 130
Acenaphthene	0.667	0.6447		mg/Kg		97	58 - 130

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-125453/2-A

Matrix: Solid

Analysis Batch: 125638

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125453

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	0.667	0.7326		mg/Kg		110	54 - 130
1-Methylnaphthalene	0.667	0.6110		mg/Kg		92	51 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	90		10 - 155
2-Fluorophenol	81		25 - 132
2-Fluorobiphenyl	92		38 - 127
Terphenyl-d14	115		53 - 134
2,4,6-Tribromophenol	80		10 - 148
Phenol-d5 (Surr)	98		27 - 123

Lab Sample ID: 600-85318-26 MS

Matrix: Solid

Analysis Batch: 125638

Client Sample ID: MW-27A (0-2)

Prep Type: Total/NA

Prep Batch: 125453

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	0.00600	U	0.850	0.7766		mg/Kg	☼	91	36 - 122
Acenaphthylene	0.00254	U	0.850	0.8058		mg/Kg	☼	95	32 - 137
Benzo[g,h,i]perylene	0.0129	U *	0.850	0.9448	N *	mg/Kg	☼	111	34 - 110
Phenanthrene	0.0148	J	0.850	0.8593		mg/Kg	☼	99	26 - 126
Benzo[k]fluoranthene	0.00379	U *	0.850	0.8817	*	mg/Kg	☼	104	33 - 137
Benzo[a]pyrene	0.00409	U *	0.850	0.8997	*	mg/Kg	☼	106	30 - 130
Anthracene	0.00760	J	0.850	0.8302		mg/Kg	☼	97	35 - 115
2-Methylnaphthalene	0.0146	J	0.850	0.7149		mg/Kg	☼	82	32 - 136
Pyrene	0.00465	U *	0.850	1.169	*	mg/Kg	☼	138	28 - 138
Dibenz(a,h)anthracene	0.00923	U *	0.850	0.9887	*	mg/Kg	☼	116	19 - 125
Naphthalene	0.0101	J	0.850	0.7099		mg/Kg	☼	82	30 - 112
Fluoranthene	0.00790	U	0.850	0.6247		mg/Kg	☼	73	37 - 132
Benzo[a]anthracene	0.0138	J *	0.850	0.9531	*	mg/Kg	☼	110	38 - 128
Indeno[1,2,3-cd]pyrene	0.00890	U *	0.850	0.7919	*	mg/Kg	☼	93	30 - 112
Chrysene	0.0361	J *	0.850	0.9702	*	mg/Kg	☼	110	36 - 130
Acenaphthene	0.00366	U	0.850	0.7827		mg/Kg	☼	92	25 - 134
Benzo[b]fluoranthene	0.00437	U *	0.850	0.9162	*	mg/Kg	☼	108	40 - 131
1-Methylnaphthalene	0.00693	J	0.850	0.7217		mg/Kg	☼	84	63 - 137

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	89		10 - 155
2-Fluorophenol	82		25 - 132
2-Fluorobiphenyl	88		38 - 127
Terphenyl-d14	121	*	53 - 134
2,4,6-Tribromophenol	89		10 - 148
Phenol-d5 (Surr)	92		27 - 123

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: 600-85318-26 MSD

Matrix: Solid

Analysis Batch: 125638

Client Sample ID: MW-27A (0-2)

Prep Type: Total/NA

Prep Batch: 125453

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluorene	0.00600	U	0.848	0.8740		mg/Kg	☼	103	36 - 122	12	30
Acenaphthylene	0.00254	U	0.848	0.8986		mg/Kg	☼	106	32 - 137	11	30
Benzo[g,h,i]perylene	0.0129	U *	0.848	0.9774	N *	mg/Kg	☼	115	34 - 110	3	30
Phenanthrene	0.0148	J	0.848	0.9416		mg/Kg	☼	109	26 - 126	9	30
Benzo[k]fluoranthene	0.00379	U *	0.848	0.8825	*	mg/Kg	☼	104	33 - 137	0	30
Benzo[a]pyrene	0.00409	U *	0.848	0.9529	*	mg/Kg	☼	112	30 - 130	6	30
Anthracene	0.00760	J	0.848	0.9256		mg/Kg	☼	108	35 - 115	11	30
2-Methylnaphthalene	0.0146	J	0.848	0.7647		mg/Kg	☼	88	32 - 136	7	30
Pyrene	0.00465	U *	0.848	1.182	N *	mg/Kg	☼	139	28 - 138	1	30
Dibenz(a,h)anthracene	0.00923	U *	0.848	0.9432	*	mg/Kg	☼	111	19 - 125	5	30
Naphthalene	0.0101	J	0.848	0.7700		mg/Kg	☼	90	30 - 112	8	30
Fluoranthene	0.00790	U	0.848	0.6824		mg/Kg	☼	80	37 - 132	9	30
Benzo[a]anthracene	0.0138	J *	0.848	0.9894	*	mg/Kg	☼	115	38 - 128	4	30
Indeno[1,2,3-cd]pyrene	0.00890	U *	0.848	0.7965	*	mg/Kg	☼	94	30 - 112	1	30
Chrysene	0.0361	J *	0.848	0.9661	*	mg/Kg	☼	110	36 - 130	0	30
Acenaphthene	0.00366	U	0.848	0.8667		mg/Kg	☼	102	25 - 134	10	30
Benzo[b]fluoranthene	0.00437	U *	0.848	0.8916	*	mg/Kg	☼	105	40 - 131	3	30
1-Methylnaphthalene	0.00693	J	0.848	0.8139		mg/Kg	☼	95	63 - 137	12	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Nitrobenzene-d5	91		10 - 155
2-Fluorophenol	76		25 - 132
2-Fluorobiphenyl	97		38 - 127
Terphenyl-d14	128	*	53 - 134
2,4,6-Tribromophenol	106		10 - 148
Phenol-d5 (Surr)	96		27 - 123

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 600-124838/1-A

Matrix: Solid

Analysis Batch: 125027

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124838

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	0.00160	U	0.0167	0.00160	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1221	0.00863	U	0.0167	0.00863	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1232	0.00670	U	0.0167	0.00670	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1242	0.00124	U	0.0167	0.00124	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1248	0.00249	U	0.0167	0.00249	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1254	0.00221	U	0.0167	0.00221	mg/Kg		01/13/14 14:23	01/14/14 15:08	1
PCB-1260	0.0135	U	0.0167	0.0135	mg/Kg		01/13/14 14:23	01/14/14 15:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		58 - 164	01/13/14 14:23	01/14/14 15:08	1
DCB Decachlorobiphenyl	110		70 - 164	01/13/14 14:23	01/14/14 15:08	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 600-124838/2-A

Matrix: Solid

Analysis Batch: 125027

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124838

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	0.167	0.1323		mg/Kg		79	68 - 122
PCB-1260	0.167	0.1460		mg/Kg		88	10 - 158
Surrogate	%Recovery	LCS Qualifier	Limits				
Tetrachloro-m-xylene	83		58 - 164				
DCB Decachlorobiphenyl	106		70 - 164				

Lab Sample ID: 600-85318-A-36-B MS

Matrix: Solid

Analysis Batch: 125030

Client Sample ID: 600-85318-A-36-B MS

Prep Type: Total/NA

Prep Batch: 124838

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	0.00198	U	0.207	0.2049		mg/Kg	☼	99	10 - 154
PCB-1260	0.0167	U	0.207	0.2272		mg/Kg	☼	110	10 - 158
Surrogate	%Recovery	MS Qualifier	Limits						
Tetrachloro-m-xylene	93		58 - 164						
DCB Decachlorobiphenyl	121		70 - 164						

Lab Sample ID: 600-85318-A-36-C MSD

Matrix: Solid

Analysis Batch: 125030

Client Sample ID: 600-85318-A-36-C MSD

Prep Type: Total/NA

Prep Batch: 124838

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
PCB-1016	0.00198	U	0.206	0.1927		mg/Kg	☼	93	10 - 154	6	30
PCB-1260	0.0167	U	0.206	0.2059		mg/Kg	☼	100	10 - 158	10	30
Surrogate	%Recovery	MSD Qualifier	Limits								
Tetrachloro-m-xylene	88		58 - 164								
DCB Decachlorobiphenyl	115		70 - 164								

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Lab Sample ID: MB 600-124920/1-A

Matrix: Solid

Analysis Batch: 125003

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124920

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	3.80	U	10.0	3.80	mg/Kg		01/14/14 12:54	01/14/14 14:57	1
>C12-C28	4.06	U	10.0	4.06	mg/Kg		01/14/14 12:54	01/14/14 14:57	1
>C28-C35	4.06	U	10.0	4.06	mg/Kg		01/14/14 12:54	01/14/14 14:57	1
C6-C35	7.48	U	10.0	7.48	mg/Kg		01/14/14 12:54	01/14/14 14:57	1
Surrogate	%Recovery	MB Qualifier	Limits						
o-Terphenyl	93		70 - 130						

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC) (Continued)

Lab Sample ID: LCS 600-124920/2-A

Matrix: Solid

Analysis Batch: 125003

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124920

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
C6-C12	250	234.9		mg/Kg		94	75 - 125
>C12-C28	250	224.7		mg/Kg		90	75 - 125
C6-C35	500	459.6		mg/Kg		92	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	109		70 - 130

Lab Sample ID: MB 600-124950/1-A

Matrix: Water

Analysis Batch: 125003

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124950

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C12	0.830	U	5.00	0.830	mg/L		01/14/14 15:16	01/15/14 01:55	1
>C12-C28	0.960	U	5.00	0.960	mg/L		01/14/14 15:16	01/15/14 01:55	1
>C28-C35	0.960	U	5.00	0.960	mg/L		01/14/14 15:16	01/15/14 01:55	1
C6-C35	1.56	U	5.00	1.56	mg/L		01/14/14 15:16	01/15/14 01:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	102		70 - 130	01/14/14 15:16	01/15/14 01:55	1

Lab Sample ID: LCS 600-124950/2-A

Matrix: Water

Analysis Batch: 125003

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124950

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
C6-C12	33.3	36.71		mg/L		110	75 - 125
>C12-C28	33.3	34.95		mg/L		105	75 - 125
C6-C35	66.7	71.65		mg/L		107	75 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	116		70 - 130

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-124797/1-A

Matrix: Water

Analysis Batch: 125051

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124797

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00630	U	0.0500	0.00630	mg/L		01/13/14 09:01	01/15/14 12:23	1
Arsenic	0.004240	J ^	0.0100	0.00328	mg/L		01/13/14 09:01	01/15/14 12:23	1
Cadmium	0.000350	U ^	0.00500	0.000350	mg/L		01/13/14 09:01	01/15/14 12:23	1
Lead	0.00290	U ^	0.0100	0.00290	mg/L		01/13/14 09:01	01/15/14 12:23	1
Selenium	0.00417	U	0.0400	0.00417	mg/L		01/13/14 09:01	01/15/14 12:23	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCS 600-124797/2-A

Matrix: Water

Analysis Batch: 125051

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	1.016		mg/L		102	80 - 120
Arsenic	1.00	0.9953	^	mg/L		100	80 - 120
Cadmium	0.500	0.4990	^	mg/L		100	80 - 120
Lead	1.00	1.028	^	mg/L		103	80 - 120
Selenium	1.00	0.9947		mg/L		99	80 - 120

Lab Sample ID: MB 600-124836/1-A

Matrix: Solid

Analysis Batch: 124882

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 124836

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/13/14 14:19	01/14/14 08:21	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/13/14 14:19	01/14/14 08:21	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/13/14 14:19	01/14/14 08:21	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/13/14 14:19	01/14/14 08:21	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/13/14 14:19	01/14/14 08:21	1

Lab Sample ID: LCS 600-124836/2-A

Matrix: Solid

Analysis Batch: 124882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	88.2	66.54		mg/Kg		75	50 - 150
Arsenic	99.6	95.57		mg/Kg		96	78 - 122
Cadmium	182	179.3		mg/Kg		99	81 - 119
Lead	115	110.5		mg/Kg		96	79 - 121
Selenium	150	144.3		mg/Kg		96	80 - 120

Lab Sample ID: 600-85318-14 MS

Matrix: Solid

Analysis Batch: 124882

Client Sample ID: MW-27D (0.5-2)

Prep Type: Total/NA

Prep Batch: 124836

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	2.05	J	63.9	27.07	N	mg/Kg	☼	39	75 - 125
Arsenic	10.7		63.9	69.18		mg/Kg	☼	92	75 - 125
Cadmium	15.1		31.9	51.38		mg/Kg	☼	114	75 - 125
Lead	315		63.9	555.1	4	mg/Kg	☼	377	75 - 125
Selenium	0.324	U	63.9	57.04		mg/Kg	☼	89	75 - 125

Lab Sample ID: 600-85318-14 MSD

Matrix: Solid

Analysis Batch: 124882

Client Sample ID: MW-27D (0.5-2)

Prep Type: Total/NA

Prep Batch: 124836

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	2.05	J	62.6	27.54	N	mg/Kg	☼	41	75 - 125	2	20
Arsenic	10.7		62.6	70.41		mg/Kg	☼	95	75 - 125	2	20
Cadmium	15.1		31.3	54.91	N	mg/Kg	☼	127	75 - 125	7	20
Lead	315		62.6	405.9	4 N	mg/Kg	☼	146	75 - 125	31	20
Selenium	0.324	U	62.6	56.62		mg/Kg	☼	90	75 - 125	1	20

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Lab Sample ID: 600-85318-20 MS**  
**Matrix: Solid**  
**Analysis Batch: 124882**

**Client Sample ID: MW-42 (0.5-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 124836**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	13.9		63.6	62.09		mg/Kg	☼	76	75 - 125
Cadmium	1.82		31.8	31.12		mg/Kg	☼	92	75 - 125
Lead	241		63.6	79.68	N	mg/Kg	☼	-253	75 - 125
Selenium	0.502	J	63.6	51.77		mg/Kg	☼	81	75 - 125

**Lab Sample ID: 600-85318-20 MSD**  
**Matrix: Solid**  
**Analysis Batch: 124882**

**Client Sample ID: MW-42 (0.5-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 124836**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	13.9		61.9	59.96	N	mg/Kg	☼	74	75 - 125	3	20
Cadmium	1.82		31.0	30.37		mg/Kg	☼	92	75 - 125	2	20
Lead	241		61.9	74.50	N	mg/Kg	☼	-268	75 - 125	7	20
Selenium	0.502	J	61.9	50.72		mg/Kg	☼	81	75 - 125	2	20

**Lab Sample ID: 600-85318-14 DU**  
**Matrix: Solid**  
**Analysis Batch: 124882**

**Client Sample ID: MW-27D (0.5-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 124836**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	2.05	J	2.568	J	mg/Kg	☼	23	20
Arsenic	10.7		10.17		mg/Kg	☼	5	20
Cadmium	15.1		16.92		mg/Kg	☼	12	20
Lead	315		327.3		mg/Kg	☼	4	20
Selenium	0.324	U	0.321	U	mg/Kg	☼	NC	20

**Lab Sample ID: 600-85318-20 DU**  
**Matrix: Solid**  
**Analysis Batch: 124882**

**Client Sample ID: MW-42 (0.5-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 124836**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	0.287	U	0.304	U	mg/Kg	☼	NC	20
Arsenic	13.9		12.84		mg/Kg	☼	8	20
Cadmium	1.82		0.4723	F	mg/Kg	☼	118	20
Lead	241		22.22	F	mg/Kg	☼	166	20
Selenium	0.502	J	0.340	U	mg/Kg	☼	NC	20

**Lab Sample ID: MB 600-124919/1-A**  
**Matrix: Solid**  
**Analysis Batch: 125010**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 124919**

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Cadmium	0.03000	J	0.250	0.0256	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/14/14 12:46	01/15/14 12:51	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/14/14 12:46	01/15/14 12:51	1

TestAmerica Houston

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: LCSSRM 600-124919/2-A

Matrix: Solid

Analysis Batch: 125010

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 124919

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.2	101.7		mg/Kg		115.3	45.4 - 231.3
Arsenic	99.6	99.60		mg/Kg		100.0	80.8 - 119.5
Cadmium	182	190.9		mg/Kg		104.9	81.9 - 118.1
Lead	115	115.8		mg/Kg		100.7	81.8 - 119.1
Selenium	150	147.1		mg/Kg		98.1	77.3 - 122.7

Lab Sample ID: MB 600-125018/1-A

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 125018

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.232	U	2.50	0.232	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Arsenic	0.218	U	1.00	0.218	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Lead	0.105	U	0.500	0.105	mg/Kg		01/15/14 12:30	01/16/14 09:51	1
Selenium	0.259	U	2.00	0.259	mg/Kg		01/15/14 12:30	01/16/14 09:51	1

Lab Sample ID: LCSSRM 600-125018/2-A

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 125018

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	88.2	59.66		mg/Kg		67.6	45.4 - 231.3
Arsenic	99.6	98.49		mg/Kg		98.9	80.8 - 119.5
Cadmium	182	178.7		mg/Kg		98.2	81.9 - 118.1
Lead	115	110.8		mg/Kg		96.3	81.8 - 119.1
Selenium	150	144.7		mg/Kg		96.5	77.3 - 122.7

Lab Sample ID: 600-85318-36 MS

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: 2013-BSA-2A(0-2)

Prep Type: Total/NA

Prep Batch: 125018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	17.1		61.4	31.60	N	mg/Kg	✱	24	75 - 125
Arsenic	34.9		61.4	67.00	N	mg/Kg	✱	52	75 - 125
Cadmium	16.5		30.7	38.79	N	mg/Kg	✱	73	75 - 125
Lead	2880		61.4	1880	4	mg/Kg	✱	-1628	75 - 125
Selenium	1.07	J	61.4	53.54		mg/Kg	✱	85	75 - 125

TestAmerica Houston



# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Lab Sample ID: 600-85318-36 MSD

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: 2013-BSA-2A(0-2)

Prep Type: Total/NA

Prep Batch: 125018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	17.1		60.2	27.98	N	mg/Kg	☼	18	75 - 125	12	20
Arsenic	34.9		60.2	64.44	N	mg/Kg	☼	49	75 - 125	4	20
Cadmium	16.5		30.1	37.80	N	mg/Kg	☼	71	75 - 125	3	20
Lead	2880		60.2	1422	4 N	mg/Kg	☼	-2420	75 - 125	28	20
Selenium	1.07	J	60.2	52.91		mg/Kg	☼	86	75 - 125	1	20

Lab Sample ID: 600-85318-36 DU

Matrix: Solid

Analysis Batch: 125110

Client Sample ID: 2013-BSA-2A(0-2)

Prep Type: Total/NA

Prep Batch: 125018

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	17.1		13.62	F	mg/Kg	☼	23	20
Arsenic	34.9		14.55	F	mg/Kg	☼	82	20
Cadmium	16.5		14.46		mg/Kg	☼	13	20
Lead	2880		2740		mg/Kg	☼	5	20
Selenium	1.07	J	0.7478	J	mg/Kg	☼	35	20

## Method: Moisture - Percent Moisture

Lab Sample ID: 600-85318-1 DU

Matrix: Solid

Analysis Batch: 124801

Client Sample ID: 2013-FFTA-01 (0.25-2)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	22		22		%		0.05	20
Percent Solids	78		78		%		0.01	20

Lab Sample ID: 600-85318-21 DU

Matrix: Solid

Analysis Batch: 124801

Client Sample ID: DUP-6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	22		23		%		2	20
Percent Solids	78		77		%		0.5	20

Lab Sample ID: 600-85318-31 DU

Matrix: Solid

Analysis Batch: 125061

Client Sample ID: D12A (0-0.5)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Moisture	25		25		%		2	20
Percent Solids	75		75		%		0.8	20

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Analyte	MQL	MDL	Units	Method
1,1,1-Trichloroethane	0.00500	0.000740	mg/Kg	8260B
1,1,1-Trichloroethane	0.00500	0.000980	mg/L	8260B
1,1,2,2-Tetrachloroethane	0.00500	0.000870	mg/Kg	8260B
1,1,2,2-Tetrachloroethane	0.00500	0.000800	mg/L	8260B
1,1,2-Trichloroethane	0.00500	0.000730	mg/Kg	8260B
1,1,2-Trichloroethane	0.00500	0.000530	mg/L	8260B
1,1-Dichloroethane	0.00500	0.000870	mg/Kg	8260B
1,1-Dichloroethane	0.00500	0.000500	mg/L	8260B
1,1-Dichloroethene	0.00500	0.00122	mg/Kg	8260B
1,1-Dichloroethene	0.00500	0.000760	mg/L	8260B
1,2-Dichloroethane	0.00500	0.000900	mg/Kg	8260B
1,2-Dichloroethane	0.00500	0.00101	mg/L	8260B
1,2-Dichloroethene, Total	0.0100	0.00190	mg/Kg	8260B
1,2-Dichloroethene, Total	0.0100	0.000840	mg/L	8260B
1,2-Dichloropropane	0.00500	0.000710	mg/Kg	8260B
1,2-Dichloropropane	0.00500	0.00141	mg/L	8260B
2-Butanone (MEK)	0.0100	0.00190	mg/Kg	8260B
2-Butanone (MEK)	0.0100	0.00157	mg/L	8260B
2-Hexanone	0.0100	0.00101	mg/Kg	8260B
2-Hexanone	0.0100	0.00142	mg/L	8260B
4-Methyl-2-pentanone (MIBK)	0.0100	0.00147	mg/Kg	8260B
4-Methyl-2-pentanone (MIBK)	0.0100	0.00111	mg/L	8260B
Acetone	0.0100	0.00166	mg/Kg	8260B
Acetone	0.0100	0.00227	mg/L	8260B
Benzene	0.00500	0.000630	mg/Kg	8260B
Benzene	0.00500	0.000560	mg/L	8260B
Bromodichloromethane	0.00500	0.000660	mg/Kg	8260B
Bromodichloromethane	0.00500	0.000760	mg/L	8260B
Bromoform	0.00500	0.00137	mg/Kg	8260B
Bromoform	0.00500	0.000770	mg/L	8260B
Bromomethane	0.0100	0.000830	mg/Kg	8260B
Bromomethane	0.0100	0.00215	mg/L	8260B
Carbon disulfide	0.0100	0.000550	mg/Kg	8260B
Carbon disulfide	0.00500	0.00170	mg/L	8260B
Carbon tetrachloride	0.00500	0.00113	mg/Kg	8260B
Carbon tetrachloride	0.00500	0.000920	mg/L	8260B
Chlorobenzene	0.00500	0.000960	mg/Kg	8260B
Chlorobenzene	0.00500	0.000820	mg/L	8260B
Chlorobromomethane	0.00500	0.00178	mg/Kg	8260B
Chlorobromomethane	0.00500	0.000810	mg/L	8260B
Chloroethane	0.0100	0.00140	mg/Kg	8260B
Chloroethane	0.0100	0.00173	mg/L	8260B
Chloroform	0.00500	0.000660	mg/Kg	8260B
Chloroform	0.00500	0.000820	mg/L	8260B
Chloromethane	0.0100	0.00166	mg/Kg	8260B
Chloromethane	0.0100	0.000850	mg/L	8260B
cis-1,2-Dichloroethene	0.00500	0.000830	mg/Kg	8260B
cis-1,2-Dichloroethene	0.00500	0.000560	mg/L	8260B
cis-1,3-Dichloropropene	0.00500	0.000540	mg/Kg	8260B
cis-1,3-Dichloropropene	0.00500	0.000970	mg/L	8260B
Dibromochloromethane	0.00500	0.000940	mg/Kg	8260B
Dibromochloromethane	0.00500	0.000920	mg/L	8260B

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

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

Analyte	MQL	MDL	Units	Method
Ethylbenzene	0.00500	0.00102	mg/Kg	8260B
Ethylbenzene	0.00500	0.00129	mg/L	8260B
Methylene Chloride	0.0100	0.00219	mg/Kg	8260B
Methylene Chloride	0.0100	0.00143	mg/L	8260B
m-Xylene & p-Xylene	0.0100	0.00152	mg/Kg	8260B
m-Xylene & p-Xylene	0.0100	0.00126	mg/L	8260B
o-Xylene	0.00500	0.00113	mg/Kg	8260B
o-Xylene	0.00500	0.000930	mg/L	8260B
Styrene	0.00500	0.000710	mg/Kg	8260B
Styrene	0.00500	0.000560	mg/L	8260B
Tetrachloroethene	0.00500	0.000710	mg/Kg	8260B
Tetrachloroethene	0.00500	0.00124	mg/L	8260B
Toluene	0.00500	0.00138	mg/Kg	8260B
Toluene	0.00500	0.000550	mg/L	8260B
trans-1,2-Dichloroethene	0.00500	0.00114	mg/Kg	8260B
trans-1,2-Dichloroethene	0.00500	0.000880	mg/L	8260B
trans-1,3-Dichloropropene	0.00500	0.000580	mg/Kg	8260B
trans-1,3-Dichloropropene	0.00500	0.000590	mg/L	8260B
Trichloroethene	0.00500	0.00140	mg/Kg	8260B
Trichloroethene	0.00500	0.00158	mg/L	8260B
Vinyl acetate	0.00500	0.000930	mg/Kg	8260B
Vinyl acetate	0.0100	0.000600	mg/L	8260B
Vinyl chloride	0.0100	0.000900	mg/Kg	8260B
Vinyl chloride	0.00500	0.000850	mg/L	8260B
Xylenes, Total	0.00500	0.00113	mg/Kg	8260B
Xylenes, Total	0.00500	0.00198	mg/L	8260B

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	MQL	MDL	Units	Method
1,2,4-Trichlorobenzene	0.0167	0.00210	mg/Kg	8270C LL
1,2-Dichlorobenzene	0.0167	0.00302	mg/Kg	8270C LL
1,3-Dichlorobenzene	0.0167	0.00154	mg/Kg	8270C LL
1,4-Dichlorobenzene	0.0167	0.00225	mg/Kg	8270C LL
1-Methylnaphthalene	0.0167	0.00157	mg/Kg	8270C LL
1-Methylnaphthalene	0.000500	0.000190	mg/L	8270C LL
2,4,5-Trichlorophenol	0.0167	0.0100	mg/Kg	8270C LL
2,4,6-Trichlorophenol	0.0167	0.00268	mg/Kg	8270C LL
2,4-Dichlorophenol	0.0167	0.00387	mg/Kg	8270C LL
2,4-Dimethylphenol	0.0167	0.00858	mg/Kg	8270C LL
2,4-Dinitrophenol	0.100	0.00472	mg/Kg	8270C LL
2,4-Dinitrotoluene	0.0167	0.00361	mg/Kg	8270C LL
2,6-Dinitrotoluene	0.0167	0.00295	mg/Kg	8270C LL
2-Chloronaphthalene	0.0167	0.00121	mg/Kg	8270C LL
2-Chlorophenol	0.0167	0.00197	mg/Kg	8270C LL
2-Methylnaphthalene	0.0167	0.00274	mg/Kg	8270C LL
2-Methylnaphthalene	0.000500	0.000140	mg/L	8270C LL
2-Methylphenol	0.0167	0.00323	mg/Kg	8270C LL
2-Nitroaniline	0.0167	0.00489	mg/Kg	8270C LL
2-Nitrophenol	0.0167	0.00389	mg/Kg	8270C LL
3 & 4 Methylphenol	0.0333	0.00279	mg/Kg	8270C LL
3,3'-Dichlorobenzidine	0.0167	0.0102	mg/Kg	8270C LL

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	MQL	MDL	Units	Method
3-Nitroaniline	0.0167	0.00715	mg/Kg	8270C LL
4,6-Dinitro-2-methylphenol	0.0167	0.00498	mg/Kg	8270C LL
4-Bromophenyl phenyl ether	0.0167	0.00284	mg/Kg	8270C LL
4-Chloro-3-methylphenol	0.0167	0.0156	mg/Kg	8270C LL
4-Chloroaniline	0.0167	0.00582	mg/Kg	8270C LL
4-Chlorophenyl phenyl ether	0.0167	0.00180	mg/Kg	8270C LL
4-Nitroaniline	0.0167	0.0112	mg/Kg	8270C LL
4-Nitrophenol	0.0167	0.00508	mg/Kg	8270C LL
Acenaphthene	0.0167	0.00144	mg/Kg	8270C LL
Acenaphthene	0.000500	0.000160	mg/L	8270C LL
Acenaphthylene	0.0167	0.00100	mg/Kg	8270C LL
Acenaphthylene	0.000500	0.000160	mg/L	8270C LL
Anthracene	0.0167	0.00128	mg/Kg	8270C LL
Anthracene	0.000500	0.000440	mg/L	8270C LL
Benzidine	0.0833	0.00902	mg/Kg	8270C LL
Benzo[a]anthracene	0.0167	0.00138	mg/Kg	8270C LL
Benzo[a]anthracene	0.000500	0.000250	mg/L	8270C LL
Benzo[a]pyrene	0.0167	0.00161	mg/Kg	8270C LL
Benzo[a]pyrene	0.000500	0.000130	mg/L	8270C LL
Benzo[b]fluoranthene	0.0167	0.00172	mg/Kg	8270C LL
Benzo[b]fluoranthene	0.000500	0.000180	mg/L	8270C LL
Benzo[g,h,i]perylene	0.0167	0.00507	mg/Kg	8270C LL
Benzo[g,h,i]perylene	0.000500	0.000350	mg/L	8270C LL
Benzo[k]fluoranthene	0.0167	0.00149	mg/Kg	8270C LL
Benzo[k]fluoranthene	0.000500	0.000160	mg/L	8270C LL
Benzyl alcohol	0.0167	0.00583	mg/Kg	8270C LL
bis (2-Chloroisopropyl) ether	0.0167	0.00884	mg/Kg	8270C LL
Bis(2-chloroethoxy)methane	0.0167	0.00142	mg/Kg	8270C LL
Bis(2-chloroethyl)ether	0.0167	0.00165	mg/Kg	8270C LL
Bis(2-ethylhexyl) phthalate	0.0667	0.00537	mg/Kg	8270C LL
Butyl benzyl phthalate	0.0667	0.00619	mg/Kg	8270C LL
Carbazole	0.0167	0.00312	mg/Kg	8270C LL
Chrysene	0.0167	0.00102	mg/Kg	8270C LL
Chrysene	0.000500	0.000240	mg/L	8270C LL
Dibenz(a,h)anthracene	0.0167	0.00363	mg/Kg	8270C LL
Dibenz(a,h)anthracene	0.000500	0.000290	mg/L	8270C LL
Dibenzofuran	0.0167	0.00178	mg/Kg	8270C LL
Diethyl phthalate	0.0667	0.00843	mg/Kg	8270C LL
Dimethyl phthalate	0.0667	0.00489	mg/Kg	8270C LL
Di-n-butyl phthalate	0.0667	0.00259	mg/Kg	8270C LL
Di-n-octyl phthalate	0.0667	0.00190	mg/Kg	8270C LL
Fluoranthene	0.0167	0.00311	mg/Kg	8270C LL
Fluoranthene	0.000500	0.000310	mg/L	8270C LL
Fluorene	0.0167	0.00236	mg/Kg	8270C LL
Fluorene	0.000500	0.000120	mg/L	8270C LL
Hexachlorobenzene	0.0167	0.00152	mg/Kg	8270C LL
Hexachlorobutadiene	0.0167	0.00192	mg/Kg	8270C LL
Hexachlorocyclopentadiene	0.0167	0.00461	mg/Kg	8270C LL
Hexachloroethane	0.0167	0.00231	mg/Kg	8270C LL
Indeno[1,2,3-cd]pyrene	0.0167	0.00350	mg/Kg	8270C LL
Indeno[1,2,3-cd]pyrene	0.000500	0.000290	mg/L	8270C LL
Isophorone	0.0167	0.00100	mg/Kg	8270C LL

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	MQL	MDL	Units	Method
Naphthalene	0.0167	0.00135	mg/Kg	8270C LL
Naphthalene	0.000500	0.000160	mg/L	8270C LL
Nitrobenzene	0.0167	0.00296	mg/Kg	8270C LL
N-Nitrosodimethylamine	0.0167	0.00419	mg/Kg	8270C LL
N-Nitrosodi-n-propylamine	0.0167	0.00222	mg/Kg	8270C LL
N-Nitrosodiphenylamine	0.0167	0.00189	mg/Kg	8270C LL
Pentachlorophenol	0.167	0.00400	mg/Kg	8270C LL
Phenanthrene	0.0167	0.00495	mg/Kg	8270C LL
Phenanthrene	0.000500	0.000290	mg/L	8270C LL
Phenol	0.0167	0.00424	mg/Kg	8270C LL
Pyrene	0.0167	0.00183	mg/Kg	8270C LL
Pyrene	0.000500	0.000330	mg/L	8270C LL

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	MQL	MDL	Units	Method
PCB-1016	0.0167	0.00160	mg/Kg	8082
PCB-1221	0.0167	0.00863	mg/Kg	8082
PCB-1232	0.0167	0.00670	mg/Kg	8082
PCB-1242	0.0167	0.00124	mg/Kg	8082
PCB-1248	0.0167	0.00249	mg/Kg	8082
PCB-1254	0.0167	0.00221	mg/Kg	8082
PCB-1260	0.0167	0.0135	mg/Kg	8082

## Method: TX 1005 - Texas - Total Petroleum Hydrocarbon (GC)

Analyte	MQL	MDL	Units	Method
>C12-C28	10.0	4.06	mg/Kg	TX 1005
>C12-C28	5.00	0.960	mg/L	TX 1005
>C28-C35	10.0	4.06	mg/Kg	TX 1005
>C28-C35	5.00	0.960	mg/L	TX 1005
C6-C12	10.0	3.80	mg/Kg	TX 1005
C6-C12	5.00	0.830	mg/L	TX 1005
C6-C35	10.0	7.48	mg/Kg	TX 1005
C6-C35	5.00	1.56	mg/L	TX 1005

## Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Antimony	2.50	0.232	mg/Kg	6010B
Antimony	0.0500	0.00630	mg/L	6010B
Arsenic	1.00	0.218	mg/Kg	6010B
Arsenic	0.0100	0.00328	mg/L	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Cadmium	0.00500	0.000350	mg/L	6010B
Lead	0.500	0.105	mg/Kg	6010B
Lead	0.0100	0.00290	mg/L	6010B
Selenium	2.00	0.259	mg/Kg	6010B
Selenium	0.0400	0.00417	mg/L	6010B

## General Chemistry

TestAmerica Houston

# Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

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

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## GC/MS VOA

### Analysis Batch: 124815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-22	FIELD BLANK	Total/NA	Water	8260B	
600-85318-40	RINSE BLANK aeo	Total/NA	Water	8260B	
600-85318-41	TRIP BLANK	Total/NA	Water	8260B	
LCS 600-124815/3	Lab Control Sample	Total/NA	Water	8260B	
MB 600-124815/4	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 125013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	8260B	
LCS 600-125013/3	Lab Control Sample	Total/NA	Solid	8260B	
MB 600-125013/4	Method Blank	Total/NA	Solid	8260B	

### Analysis Batch: 125071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	8260B	
600-85318-4	2013-MB-3 (0.75-1.25)	Total/NA	Solid	8260B	
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	8260B	
600-85318-11	2013-MB-4 (0.83-1.33)	Total/NA	Solid	8260B	
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	8260B	
600-85318-16	MW-27C (0-2)	Total/NA	Solid	8260B	
600-85318-24	MW-27B (0-2)	Total/NA	Solid	8260B	
600-85318-26	MW-27A (0-2)	Total/NA	Solid	8260B	
LCS 600-125071/3	Lab Control Sample	Total/NA	Solid	8260B	
MB 600-125071/4	Method Blank	Total/NA	Solid	8260B	

### Analysis Batch: 125242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	8260B	
LCS 600-125242/4	Lab Control Sample	Total/NA	Solid	8260B	
MB 600-125242/3	Method Blank	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Prep Batch: 124914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-40	RINSE BLANK aeo	Total/NA	Water	3510C	
LCS 600-124914/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 600-124914/1-A	Method Blank	Total/NA	Water	3510C	

### Prep Batch: 124982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-16	MW-27C (0-2)	Total/NA	Solid	3546	
LCS 600-124982/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 600-124982/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 125073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-40	RINSE BLANK aeo	Total/NA	Water	8270C LL	124914
LCS 600-124914/2-A	Lab Control Sample	Total/NA	Water	8270C LL	124914
MB 600-124914/1-A	Method Blank	Total/NA	Water	8270C LL	124914

TestAmerica Houston



# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 125220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	3546	
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	3546	
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	3546	
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	3546	
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	3546	
600-85318-24	MW-27B (0-2)	Total/NA	Solid	3546	
LCS 600-125220/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 600-125220/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 125404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-16	MW-27C (0-2)	Total/NA	Solid	8270C LL	124982
LCS 600-124982/2-A	Lab Control Sample	Total/NA	Solid	8270C LL	124982
MB 600-124982/1-A	Method Blank	Total/NA	Solid	8270C LL	124982

### Prep Batch: 125453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-26	MW-27A (0-2)	Total/NA	Solid	3546	
600-85318-26 MS	MW-27A (0-2)	Total/NA	Solid	3546	
600-85318-26 MSD	MW-27A (0-2)	Total/NA	Solid	3546	
LCS 600-125453/2-A	Lab Control Sample	Total/NA	Solid	3546	
MB 600-125453/1-A	Method Blank	Total/NA	Solid	3546	

### Analysis Batch: 125471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	8270C LL	125220
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	8270C LL	125220
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	8270C LL	125220
LCS 600-125220/2-A	Lab Control Sample	Total/NA	Solid	8270C LL	125220
MB 600-125220/1-A	Method Blank	Total/NA	Solid	8270C LL	125220

### Analysis Batch: 125638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	8270C LL	125220
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	8270C LL	125220
600-85318-24	MW-27B (0-2)	Total/NA	Solid	8270C LL	125220
600-85318-26	MW-27A (0-2)	Total/NA	Solid	8270C LL	125453
600-85318-26 MS	MW-27A (0-2)	Total/NA	Solid	8270C LL	125453
600-85318-26 MSD	MW-27A (0-2)	Total/NA	Solid	8270C LL	125453
LCS 600-125453/2-A	Lab Control Sample	Total/NA	Solid	8270C LL	125453
MB 600-125453/1-A	Method Blank	Total/NA	Solid	8270C LL	125453

## GC Semi VOA

### Prep Batch: 124838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	3546	
600-85318-A-36-B MS	600-85318-A-36-B MS	Total/NA	Solid	3546	
600-85318-A-36-C MSD	600-85318-A-36-C MSD	Total/NA	Solid	3546	
LCS 600-124838/2-A	Lab Control Sample	Total/NA	Solid	3546	

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## GC Semi VOA (Continued)

### Prep Batch: 124838 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-124838/1-A	Method Blank	Total/NA	Solid	3546	

### Prep Batch: 124920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	TX_1005_S_Pre	
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-16	MW-27C (0-2)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-24	MW-27B (0-2)	Total/NA	Solid	p TX_1005_S_Pre	
600-85318-26	MW-27A (0-2)	Total/NA	Solid	p TX_1005_S_Pre	
LCS 600-124920/2-A	Lab Control Sample	Total/NA	Solid	p TX_1005_S_Pre	
MB 600-124920/1-A	Method Blank	Total/NA	Solid	p TX_1005_S_Pre	

### Prep Batch: 124950

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-40	RINSE BLANK aeo	Total/NA	Water	TX_1005_W_Pr	
LCS 600-124950/2-A	Lab Control Sample	Total/NA	Water	ep TX_1005_W_Pr	
MB 600-124950/1-A	Method Blank	Total/NA	Water	ep TX_1005_W_Pr	

### Analysis Batch: 124998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-40	RINSE BLANK aeo	Total/NA	Water	TX 1005	124950

### Analysis Batch: 125003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	TX 1005	124920
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	TX 1005	124920
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	TX 1005	124920
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	TX 1005	124920
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	TX 1005	124920
600-85318-16	MW-27C (0-2)	Total/NA	Solid	TX 1005	124920
600-85318-24	MW-27B (0-2)	Total/NA	Solid	TX 1005	124920
600-85318-26	MW-27A (0-2)	Total/NA	Solid	TX 1005	124920
LCS 600-124920/2-A	Lab Control Sample	Total/NA	Solid	TX 1005	124920
LCS 600-124950/2-A	Lab Control Sample	Total/NA	Water	TX 1005	124950
MB 600-124920/1-A	Method Blank	Total/NA	Solid	TX 1005	124920
MB 600-124950/1-A	Method Blank	Total/NA	Water	TX 1005	124950

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## GC Semi VOA (Continued)

### Analysis Batch: 125027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 600-124838/2-A	Lab Control Sample	Total/NA	Solid	8082	124838
MB 600-124838/1-A	Method Blank	Total/NA	Solid	8082	124838

### Analysis Batch: 125030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	8082	124838
600-85318-A-36-B MS	600-85318-A-36-B MS	Total/NA	Solid	8082	124838
600-85318-A-36-C MSD	600-85318-A-36-C MSD	Total/NA	Solid	8082	124838

## Metals

### Prep Batch: 124797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-23	RINSE BLANK-CME	Total/NA	Water	3010A	
600-85318-40	RINSE BLANK aeo	Total/NA	Water	3010A	
LCS 600-124797/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 600-124797/1-A	Method Blank	Total/NA	Water	3010A	

### Prep Batch: 124836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-4	2013-MB-3 (0.75-1.25)	Total/NA	Solid	3050B	
600-85318-7 - DL	2013-MB-5 (0.5-5)	Total/NA	Solid	3050B	
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	3050B	
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	3050B	
600-85318-11	2013-MB-4 (0.83-1.33)	Total/NA	Solid	3050B	
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	3050B	
600-85318-14 DU	MW-27D (0.5-2)	Total/NA	Solid	3050B	
600-85318-14 MS	MW-27D (0.5-2)	Total/NA	Solid	3050B	
600-85318-14 MSD	MW-27D (0.5-2)	Total/NA	Solid	3050B	
600-85318-17	MW-41 (0-0.5)	Total/NA	Solid	3050B	
600-85318-18	MW-41 (0.5-2)	Total/NA	Solid	3050B	
600-85318-19	MW-42 (0-0.5)	Total/NA	Solid	3050B	
600-85318-20	MW-42 (0.5-2)	Total/NA	Solid	3050B	
600-85318-20 DU	MW-42 (0.5-2)	Total/NA	Solid	3050B	
600-85318-20 MS	MW-42 (0.5-2)	Total/NA	Solid	3050B	
600-85318-20 MSD	MW-42 (0.5-2)	Total/NA	Solid	3050B	
600-85318-21	DUP-6	Total/NA	Solid	3050B	
600-85318-24	MW-27B (0-2)	Total/NA	Solid	3050B	
600-85318-26	MW-27A (0-2)	Total/NA	Solid	3050B	
600-85318-32	D13A (0-0.5)	Total/NA	Solid	3050B	
600-85318-33	2013-C2L-03-(0-0.5)	Total/NA	Solid	3050B	
600-85318-37	2013-AD-04 (0-0.5)	Total/NA	Solid	3050B	
LCS 600-124836/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-124836/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 124882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-4	2013-MB-3 (0.75-1.25)	Total/NA	Solid	6010B	124836
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	6010B	124836
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	6010B	124836

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Metals (Continued)

### Analysis Batch: 124882 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-11	2013-MB-4 (0.83-1.33)	Total/NA	Solid	6010B	124836
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-14 DU	MW-27D (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-14 MS	MW-27D (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-14 MSD	MW-27D (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-17	MW-41 (0-0.5)	Total/NA	Solid	6010B	124836
600-85318-18	MW-41 (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-19	MW-42 (0-0.5)	Total/NA	Solid	6010B	124836
600-85318-20	MW-42 (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-20 DU	MW-42 (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-20 MS	MW-42 (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-20 MSD	MW-42 (0.5-2)	Total/NA	Solid	6010B	124836
600-85318-21	DUP-6	Total/NA	Solid	6010B	124836
600-85318-24	MW-27B (0-2)	Total/NA	Solid	6010B	124836
600-85318-26	MW-27A (0-2)	Total/NA	Solid	6010B	124836
600-85318-32	D13A (0-0.5)	Total/NA	Solid	6010B	124836
600-85318-33	2013-C2L-03-(0-0.5)	Total/NA	Solid	6010B	124836
600-85318-37	2013-AD-04 (0-0.5)	Total/NA	Solid	6010B	124836
LCS 600-124836/2-A	Lab Control Sample	Total/NA	Solid	6010B	124836
MB 600-124836/1-A	Method Blank	Total/NA	Solid	6010B	124836

### Prep Batch: 124919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-16	MW-27C (0-2)	Total/NA	Solid	3050B	
600-85318-30	D11A (0-0.5)	Total/NA	Solid	3050B	
600-85318-31	D12A (0-0.5)	Total/NA	Solid	3050B	
LCSSRM 600-124919/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-124919/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-7 - DL	2013-MB-5 (0.5-5)	Total/NA	Solid	6010B	124836
600-85318-16	MW-27C (0-2)	Total/NA	Solid	6010B	124919
600-85318-30	D11A (0-0.5)	Total/NA	Solid	6010B	124919
600-85318-31	D12A (0-0.5)	Total/NA	Solid	6010B	124919
LCSSRM 600-124919/2-A	Lab Control Sample	Total/NA	Solid	6010B	124919
MB 600-124919/1-A	Method Blank	Total/NA	Solid	6010B	124919

### Prep Batch: 125018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-36	2013-BSA-2A(0-2)	Total/NA	Solid	3050B	
600-85318-36 DU	2013-BSA-2A(0-2)	Total/NA	Solid	3050B	
600-85318-36 MS	2013-BSA-2A(0-2)	Total/NA	Solid	3050B	
600-85318-36 MSD	2013-BSA-2A(0-2)	Total/NA	Solid	3050B	
LCSSRM 600-125018/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-125018/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 125051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-23	RINSE BLANK-CME	Total/NA	Water	6010B	124797
600-85318-40	RINSE BLANK aeo	Total/NA	Water	6010B	124797

TestAmerica Houston

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Metals (Continued)

### Analysis Batch: 125051 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 600-124797/2-A	Lab Control Sample	Total/NA	Water	6010B	124797
MB 600-124797/1-A	Method Blank	Total/NA	Water	6010B	124797

### Analysis Batch: 125110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-36	2013-BSA-2A(0-2)	Total/NA	Solid	6010B	125018
600-85318-36 DU	2013-BSA-2A(0-2)	Total/NA	Solid	6010B	125018
600-85318-36 MS	2013-BSA-2A(0-2)	Total/NA	Solid	6010B	125018
600-85318-36 MSD	2013-BSA-2A(0-2)	Total/NA	Solid	6010B	125018
LCSSRM 600-125018/2-A	Lab Control Sample	Total/NA	Solid	6010B	125018
MB 600-125018/1-A	Method Blank	Total/NA	Solid	6010B	125018

## General Chemistry

### Analysis Batch: 124801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-1	2013-FFTA-01 (0.25-2)	Total/NA	Solid	Moisture	
600-85318-1 DU	2013-FFTA-01 (0.25-2)	Total/NA	Solid	Moisture	
600-85318-3	2013-FFTA-03 (18-19)	Total/NA	Solid	Moisture	
600-85318-4	2013-MB-3 (0.75-1.25)	Total/NA	Solid	Moisture	
600-85318-7	2013-MB-5 (0.5-5)	Total/NA	Solid	Moisture	
600-85318-8	2013-MB-5 (10-12)	Total/NA	Solid	Moisture	
600-85318-11	2013-MB-4 (0.83-1.33)	Total/NA	Solid	Moisture	
600-85318-14	MW-27D (0.5-2)	Total/NA	Solid	Moisture	
600-85318-17	MW-41 (0-0.5)	Total/NA	Solid	Moisture	
600-85318-18	MW-41 (0.5-2)	Total/NA	Solid	Moisture	
600-85318-19	MW-42 (0-0.5)	Total/NA	Solid	Moisture	
600-85318-20	MW-42 (0.5-2)	Total/NA	Solid	Moisture	
600-85318-20 MS	MW-42 (0.5-2)	Total/NA	Solid	Moisture	
600-85318-20 MSD	MW-42 (0.5-2)	Total/NA	Solid	Moisture	
600-85318-21	DUP-6	Total/NA	Solid	Moisture	
600-85318-21 DU	DUP-6	Total/NA	Solid	Moisture	
600-85318-24	MW-27B (0-2)	Total/NA	Solid	Moisture	
600-85318-26	MW-27A (0-2)	Total/NA	Solid	Moisture	
600-85318-32	D13A (0-0.5)	Total/NA	Solid	Moisture	
600-85318-33	2013-C2L-03-(0-0.5)	Total/NA	Solid	Moisture	
600-85318-36	2013-BSA-2A(0-2)	Total/NA	Solid	Moisture	
600-85318-37	2013-AD-04 (0-0.5)	Total/NA	Solid	Moisture	

### Analysis Batch: 124909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-16	MW-27C (0-2)	Total/NA	Solid	Moisture	
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	Moisture	

### Analysis Batch: 125061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-30	D11A (0-0.5)	Total/NA	Solid	Moisture	
600-85318-31	D12A (0-0.5)	Total/NA	Solid	Moisture	
600-85318-31 DU	D12A (0-0.5)	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-FFTA-01 (0.25-2)**

**Date Collected: 01/08/14 10:20**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-1**

**Matrix: Solid**

**Percent Solids: 78.5**

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 g	5 g	125013	01/14/14 15:28	WS1	TAL HOU
Total/NA	Prep	3546			15.06 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		20	15.06 g	1.0 mL	125638	01/22/14 21:55	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.02 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.02 g	10.00 mL	125003	01/14/14 16:07	RJV	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-FFTA-03 (18-19)**

**Date Collected: 01/08/14 10:45**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-3**

**Matrix: Solid**

**Percent Solids: 93.4**

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 g	5 g	125071	01/15/14 20:16	KLV	TAL HOU
Total/NA	Prep	3546			15.03 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		1	15.03 g	1.0 mL	125471	01/21/14 02:32	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.07 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.07 g	10.00 mL	125003	01/14/14 16:41	RJV	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-MB-3 (0.75-1.25)**

**Date Collected: 01/08/14 12:18**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-4**

**Matrix: Solid**

**Percent Solids: 77.2**

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 g	5 g	125071	01/15/14 20:41	KLV	TAL HOU
Total/NA	Prep	3050B			1.06 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	124882	01/14/14 08:28	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-MB-5 (0.5-5)**

**Date Collected: 01/08/14 13:20**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-7**

**Matrix: Solid**

**Percent Solids: 76.7**

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 g	5 g	125071	01/15/14 21:06	KLV	TAL HOU
Total/NA	Prep	3546			15.08 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		1	15.08 g	1.0 mL	125471	01/21/14 02:59	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.02 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.02 g	10.00 mL	125003	01/14/14 17:17	RJV	TAL HOU
Total/NA	Prep	3050B			1.05 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	124882	01/14/14 08:52	DCL	TAL HOU
Total/NA	Prep	3050B	DL		1.05 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: 2013-MB-5 (0.5-5)**

**Lab Sample ID: 600-85318-7**

**Date Collected: 01/08/14 13:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B	DL	10	1.05 g	50 mL	125010	01/15/14 10:39	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-MB-5 (10-12)**

**Lab Sample ID: 600-85318-8**

**Date Collected: 01/08/14 13:35**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 75.0**

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 g	5 g	125242	01/17/14 12:32	WS1	TAL HOU
Total/NA	Prep	3546			15.00 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		100	15.00 g	1.0 mL	125638	01/22/14 22:21	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.03 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		5	10.03 g	10.00 mL	125003	01/15/14 09:36	RJV	TAL HOU
Total/NA	Prep	3050B			1.01 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	124882	01/14/14 08:55	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-MB-4 (0.83-1.33)**

**Lab Sample ID: 600-85318-11**

**Date Collected: 01/08/14 15:15**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.4**

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 g	5 g	125071	01/15/14 21:55	KLV	TAL HOU
Total/NA	Prep	3050B			1.03 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	124882	01/14/14 08:57	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: MW-27D (0.5-2)**

**Lab Sample ID: 600-85318-14**

**Date Collected: 01/08/14 15:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 77.5**

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 g	5 g	125071	01/15/14 22:19	KLV	TAL HOU
Total/NA	Prep	3546			15.06 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		1	15.06 g	1.0 mL	125471	01/21/14 03:53	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.07 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.07 g	10.00 mL	125003	01/14/14 18:25	RJV	TAL HOU
Total/NA	Prep	3050B			1.03 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	124882	01/14/14 08:31	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

TestAmerica Houston



# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27C (0-2)**

**Lab Sample ID: 600-85318-16**

**Date Collected: 01/08/14 16:20**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.0**

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 g	5 g	125071	01/15/14 22:43	KLV	TAL HOU
Total/NA	Prep	3546			15.13 g	1.00 mL	124982	01/15/14 08:14	MRA	TAL HOU
Total/NA	Analysis	8270C LL		1	15.13 g	1.00 mL	125404	01/17/14 12:30	TTD	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.01 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.01 g	10.00 mL	125003	01/14/14 19:00	RJV	TAL HOU
Total/NA	Prep	3050B			1.08 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	125010	01/15/14 13:22	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124909	01/14/14 13:52	AYS	TAL HOU

**Client Sample ID: MW-41 (0-0.5)**

**Lab Sample ID: 600-85318-17**

**Date Collected: 01/08/14 13:40**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.4**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	124882	01/14/14 09:00	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: MW-41 (0.5-2)**

**Lab Sample ID: 600-85318-18**

**Date Collected: 01/08/14 13:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 76.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.00 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	124882	01/14/14 09:02	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: MW-42 (0-0.5)**

**Lab Sample ID: 600-85318-19**

**Date Collected: 01/08/14 15:40**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 72.7**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	124882	01/14/14 09:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: MW-42 (0.5-2)**

**Lab Sample ID: 600-85318-20**

**Date Collected: 01/08/14 15:45**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 74.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-42 (0.5-2)**

**Date Collected: 01/08/14 15:45**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-20**

**Matrix: Solid**

**Percent Solids: 74.0**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.09 g	50 mL	124882	01/14/14 09:07	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: DUP-6**

**Date Collected: 01/08/14 00:00**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-21**

**Matrix: Solid**

**Percent Solids: 77.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	124882	01/14/14 09:23	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: FIELD BLANK**

**Date Collected: 01/08/14 17:19**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-22**

**Matrix: Water**

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 mL	5 mL	124815	01/11/14 18:04	DT1	TAL HOU

**Client Sample ID: RINSE BLANK-CME**

**Date Collected: 01/09/14 08:50**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-23**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	124797	01/13/14 09:01	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	125051	01/15/14 12:52	DCL	TAL HOU

**Client Sample ID: MW-27B (0-2)**

**Date Collected: 01/09/14 08:55**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-24**

**Matrix: Solid**

**Percent Solids: 77.5**

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 g	5 g	125071	01/15/14 23:08	KLV	TAL HOU
Total/NA	Prep	3546			15.02 g	1.0 mL	125220	01/17/14 13:18	RLK	TAL HOU
Total/NA	Analysis	8270C LL		20	15.02 g	1.0 mL	125638	01/22/14 22:46	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.07 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.07 g	10.00 mL	125003	01/14/14 19:35	RJV	TAL HOU
Total/NA	Prep	3050B			1.00 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.00 g	50 mL	124882	01/14/14 09:26	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: MW-27A (0-2)**

**Lab Sample ID: 600-85318-26**

**Date Collected: 01/09/14 09:25**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.3**

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 g	5 g	125071	01/15/14 23:32	KLV	TAL HOU
Total/NA	Prep	3546			15.08 g	1.0 mL	125453	01/21/14 10:00	RLK	TAL HOU
Total/NA	Analysis	8270C LL		1	15.08 g	1.0 mL	125638	01/22/14 19:21	MBB	TAL HOU
Total/NA	Prep	TX_1005_S_Prep			10.02 g	10.00 mL	124920	01/14/14 12:54	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	10.02 g	10.00 mL	125003	01/14/14 20:09	RJV	TAL HOU
Total/NA	Prep	3050B			1.08 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	124882	01/14/14 09:28	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-NDA-1A(2-4)**

**Lab Sample ID: 600-85318-28**

**Date Collected: 01/09/14 10:15**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 81.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			15.04 g	5.00 mL	124838	01/13/14 14:23	RLK	TAL HOU
Total/NA	Analysis	8082		1	15.04 g	5.00 mL	125030	01/15/14 11:52	JAL	TAL HOU
Total/NA	Analysis	Moisture		1			124909	01/14/14 13:52	AYS	TAL HOU

**Client Sample ID: D11A (0-0.5)**

**Lab Sample ID: 600-85318-30**

**Date Collected: 01/09/14 10:35**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 72.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	125010	01/15/14 13:25	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: D12A (0-0.5)**

**Lab Sample ID: 600-85318-31**

**Date Collected: 01/09/14 10:50**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 74.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.07 g	50 mL	124919	01/14/14 12:46	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.07 g	50 mL	125010	01/15/14 13:27	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			125061	01/15/14 15:56	AYS	TAL HOU

**Client Sample ID: D13A (0-0.5)**

**Lab Sample ID: 600-85318-32**

**Date Collected: 01/09/14 11:04**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: D13A (0-0.5)**

**Date Collected: 01/09/14 11:04**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-32**

**Matrix: Solid**

**Percent Solids: 78.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.05 g	50 mL	124882	01/14/14 09:34	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-C2L-03-(0-0.5)**

**Date Collected: 01/09/14 11:26**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-33**

**Matrix: Solid**

**Percent Solids: 73.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.06 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.06 g	50 mL	124882	01/14/14 09:36	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-BSA-2A(0-2)**

**Date Collected: 01/09/14 12:50**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-36**

**Matrix: Solid**

**Percent Solids: 80.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	125018	01/15/14 12:30	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	125110	01/16/14 09:58	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: 2013-AD-04 (0-0.5)**

**Date Collected: 01/09/14 13:26**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-37**

**Matrix: Solid**

**Percent Solids: 79.2**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.08 g	50 mL	124836	01/13/14 14:19	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.08 g	50 mL	124882	01/14/14 09:38	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			124801	01/13/14 09:59	AYS	TAL HOU

**Client Sample ID: RINSE BLANK aeo**

**Date Collected: 01/09/14 08:30**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-40**

**Matrix: Water**

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 mL	5 mL	124815	01/11/14 18:27	DT1	TAL HOU
Total/NA	Prep	3510C			250 mL	1.0 mL	124914	01/14/14 16:09	LER	TAL HOU
Total/NA	Analysis	8270C LL		1	250 mL	1.0 mL	125073	01/15/14 01:25	MBB	TAL HOU
Total/NA	Prep	TX_1005_W_Prep			30.79 mL	3.00 mL	124950	01/14/14 15:16	NVP	TAL HOU
Total/NA	Analysis	TX 1005		1	30.79 mL	3.00 mL	124998	01/15/14 04:47	RJV	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	124797	01/13/14 09:01	NER	TAL HOU
Total/NA	Analysis	6010B		1	50 mL	50 mL	125051	01/15/14 12:54	DCL	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 600-85318-41**

**Date Collected: 01/09/14 00:00**

**Matrix: Water**

**Date Received: 01/10/14 10:31**

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 mL	5 mL	124815	01/11/14 16:54	DT1	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-1

## Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-15
Louisiana	NELAP	6	30643	06-30-15 *
Oklahoma	State Program	6	1309	08-31-15
Texas	NELAP	6	T104704223	10-31-15
USDA	Federal		P330-14-00192	06-06-17
Utah	NELAP	8	TX00083	11-30-15

\* Certification renewal pending - certification considered valid.

TestAmerica Houston

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## Chain



6/8/2015



# Chain of Custody Record

<b>Client Information</b>		Sampler: <b>CHAS TREUND</b>	Lab Pmt. Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-25671-9015.1
Client Contact: Christina Higginbotham		Phone: 817-808-8444	E-Mail: dean.joiner@testamericainc.com		Page: 2
Company: Golder Associates Inc.		Due Date Requested:	Analysis Requested		
Address: 500 Century Plaza Drive Suite 190		City: Houston	State: TX	Zip: 77073	
Phone: 281-821-6888(Tel) 281-821-6870(Fax)		PO #: Purchase Order Requested			
Email: Christina_Higginbotham@golder.com		Project #: 60004831			
Project Name: Exide Recycling Center, Frisco TX Project		SSOW#:			
Site: EXIDE - F2510					

Sample Identification	Sample Date	Sample Time	Sample Type (G=comp, G=grab)	Matrix (W=water, S=solid, O=oil, L=liquid, A=air)	Field Filtered Sample (Yes or No)	Perforin MS/MSD (Yes or No)	8260B - Target Compound List	8270C_LL - (MOD) Target Compound List	8270C_LL - (MOD) PAH List	TX_1005 - Local Method	TX_1006 - Local Method (Hold for TPH 1005 results)	9056_28D - Sulfate	6010B - Cd,Pb	6010B - As,Cd,Pb,Se	Moisture	8082 PCB	Total Number of containers	Special Instructions/Note:
2013-MB-4 (0.5-2)	01/08/14	1516	G	Solid														Hold
2013-MB-4 (2-4)	01/08/14	1520	G	Solid														Hold
MM-27D (0-2)	01/08/14	1545	G	Solid														
MM-27D (2-4)	01/08/14	1550	G	Solid														
MM-27C (0-2)	01/08/14	1620	G	Solid														
MM-41 (0-0.5)	01/08/14	1340	G	Solid														
MM-41 (0.5-2)	01/08/14	1345	G	Solid														
MM-42 (0-0.5)	01/08/14	1540	G	Solid														
MM-42 (0.5-2)	01/08/14	1545	G	Solid														
MM-42 (0.5-2) MS	01/08/14	1545	G	Solid														
MM-42 (0.5-2) MSD	01/08/14	1546	G	Solid														

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B
<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological		
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: JOHAN JENSEN	Date/Time: 01/09/2014 1515	Received by: M. McQueen	Date/Time: 1/14/14 1515
Relinquished by: M. McQueen	Date/Time: 1/14/14 1700	Received by: [Signature]	Date/Time: 1/10/14 1037
Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b>		Sampler:	LABS REVIEW		Lab PM:	Joiner, Dean A		Carrier Tracking No(s):	COC No:
Client Contact:		Phone:	817-808-8144		E-Mail:	dean.joiner@testamericainc.com			600-25571-9015.1
Company:		Golder Associates Inc.		Due Date Requested:					
Address:		500 Century Plaza Drive Suite 190		TAT Requested (days):	5 WD TRRP				
City:		Houston		State, Zip:	TX, 77073				
Phone:		281-821-6868(Tel) 281-821-6870(Fax)		PO #:	Purchase Order Requested				
Email:		Christina_Higginbotham@golder.com		Project #:	60004831				
Project Name:		Exide Recycling Center, Frisco TX Project		SSOW#:					
Site:		EX1006 - FASCO							

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=biomass, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	8270C_LL - (MOD) Target Compound List	8270C_LL - (MOD) PAH List	TX_1005 - Local Method	TX_1006 - Local Method (Hold for TPH 1005 results)	9056_28D - Sulfate	6010B - Cd,Pb	6010B - As,Cd,Pb,Se	Moisture	8082 PCB	6010B-As	Total Number of containers	Special Instructions/Note:
DUP-6	01/08/14	---	G	Solid															
FIELD BLANK	01/08/14	1719	G	Solid															
RINSE BLANK - CME	01/09/14	0850	G	Solid															
MN-27B (0-2)	01/09/14	0855	G	Solid															
MN-27B (2-4)	01/09/14	0900	G	Solid															
MN-27A (0-2)	01/09/14	0925	G	Solid															
MN-27A (2-4)	01/09/14	0930	G	Solid															
2013-NDA-1A (2-4)	01/09/14	1015	G	Solid															
E-11C (0-0.5)	01/09/14	1025	G	Solid															
D-11A (0-0.5)	01/09/14	1035	G	Solid															
D-12A (0-0.5)	01/09/14	1050	G	Solid															

Possible Hazard Identification		Sc: type Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s):	Other Remarks:

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b>		Sampler: <b>CHAS TREWID</b>	Lab PM: <b>Joiner, Dean A</b>	Carrier Tracking No(s):	COC No: <b>600-25571-9015.1</b>
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>819-808-8144</b>	E-Mail: <b>dean.joiner@testamericainc.com</b>		Page: <b>4</b>
Company: <b>Golder Associates Inc.</b>					Job #:
Address: <b>500 Century Plaza Drive Suite 190</b>		Due Date Requested:	Analysis Requested		
City: <b>Houston</b>		TAT Requested (days): <b>5 WD TRRP</b>			
State, Zip: <b>TX, 77073</b>		PO #:			
Phone: <b>281-821-6888(Tel) 281-821-6870(Fax)</b>		Purchase Order Requested			
Email: <b>Christina_Higginbotham@golder.com</b>		Project #:			
Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		SSOW#:			
Site: <b>Exide - 72510</b>					
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab, BR=Residual, A=Air)	Matrix (Wet, S-solid, O-liquid, BR=Residual, A=Air)
D-13A (0-0.5)	01/09/14	1104		G	Solid
2013-CAL-03 (0-0.5)	01/09/14	1126		G	Solid
2013-CAL-03 (1-2)	01/09/14	1127		G	Solid
2013-CAL-03 (4-5)	01/09/14	1128		G	Solid
2013-RSA-2A (0-2)	01/09/14	1250		G	Solid
2013-AD-04 (0-0.5)	01/09/14	1326		G	Solid
2013-AD-04 (0.5-2)	01/09/14	1327		G	Solid
2013-AD-04 (2-4)	01/09/14	1328		G	Solid
RUSE BLANK-GEO	01/09/14	0830		G	Solid
TRU BLANK	01/09/14			G	Solid
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: <b>JOHN JENSEN</b>	Date/Time: <b>01/09/14 1500</b>	Company: <b>COOPER</b>	Received by: <b>WILLIAMSON</b>	Date/Time: <b>1/9/14 1515</b>	Company: <b>TH</b>
Relinquished by: <b>MICHAEL JENSEN</b>	Date/Time: <b>1/9/14 1700</b>	Company: <b>TH</b>	Received by: <b>KEVIN</b>	Date/Time: <b>1/10/14 1631</b>	Company: <b>TH</b>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and other Remarks:			

**Upton, Cathy**

**From:** Upton, Cathy  
**Sent:** Tuesday, March 04, 2014 3:13 PM  
**To:** Upton, Cathy  
**Subject:** FW: Additional Metals in Soil

Dean,

We would like to report all five metals for the samples listed below. Do you think we could get revised reports for these by Wednesday?

Location ID	Sample ID	lab_sample_id	Date Sampled	Antimony	Arsenic	Cadmium
2013-SL-C15	2013-SL-C15 (0-6)	600-84633-7	2013-12-19	NA	NA	2.10
MW-42	MW-42 (0.5-2)	600-85318-20	2014-01-08	NA	13.9	1.82
MW-27B	MW-27B (0-2)	600-85318-24	2014-01-09	NA	NA	9.85
D-11A	D11A (0-0.5)	600-85318-30	2014-01-09	NA	<b>27.2</b>	1.77
2013-BSA-2A	2013-BSA-2A(0-2)	600-85318-36	2014-01-09	NA	<b>34.9</b>	16.5
ECO-2A	ECO-2A (0-0.5)	600-85389-18	2014-01-09	NA	NA	3.29
ECO-8A	ECO-8A (0-0.5)	600-85389-20	2014-01-09	NA	NA	5.65
2013-AD-3	2013-AD-03 (0-0.5)	600-85389-23	2014-01-09	NA	NA	1.51
SCC-5B	SCC-5B (0-0.5)	600-85389-29	2014-01-10	NA	NA	2.48
2013-CUFT-10B	2013-CUFT-10B (0-0.5)	600-85389-63	2014-01-10	NA	NA	2.19
SRB-VS-11A	SRB-VS-11A (0-0.5)	600-85473-15	2014-01-10	NA	NA	1.44
2013-FWFS-5A	2013-FWFS-5A (0-2)	600-85473-34	2014-01-13	NA	NA	0.52
2013-MW-17B	2013-MW-17B (0-0.5)	600-85473-38	2014-01-13	NA	NA	5.19
SCC-10B	SCC-10B (0-0.5)	600-85473-39	2014-01-13	NA	NA	1.85
2013-C2L-06	2013-C2L-06 (0-0.5)	600-85636-21	2014-01-14	NA	<b>22.6</b>	3.68
ECO-7D	ECO-7D (0-0.5)	600-85636-39	2014-01-14	NA	15.1	2.30

Thanks,  
 Anne

**Anne Faeth-Boyd, R.G., P.E.** | Senior Project Engineer | **Golder Associates Inc.**

820 South Main Street, Suite 100, St. Charles, Missouri, USA 63301

**T:** +1 (636) 724-9191 | **F:** +1 (636) 724-9323 | **C:** +1 314 503-5179 | **E:** [Anne\\_Faeth-Boyd@golder.com](mailto:Anne_Faeth-Boyd@golder.com) |  
**www.golder.com**

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**Upton, Cathy**

**From:** Higginbotham, Christina [Christina\_Higginbotham@golder.com]  
**Sent:** Tuesday, May 06, 2014 5:02 PM  
**To:** Upton, Cathy; Joiner, Dean  
**Cc:** Thomas, Jim; Faeth-Boyd, Anne  
**Subject:** Exide discrepancies - metals reporting  
**Follow Up Flag:** Follow up  
**Flag Status:** Red

Cathy and Dean,

The below revisions are being requested so the final laboratory reports are consistent with tabulated data that was already submitted.

It appears that some metals noted below were reported in an earlier package, and removed for the later data packages. We would like the specified data (see highlights) turned back "on" please.

Please let us know estimated time for these revisions, or if you have any questions regarding this request.

Thanks,  
 Christina

**600-85636 REVISION**

				Sb	As	Cd	Pb	Se	
2013-STB-4A	2013-STB-4A (2-4)	600-85636-1	2014-01-13	NA	NA	NA	NA	1540	NA

REPORT CADMIUM (confirm Cd concentrat

**600-85318 REVISIONS**

2013-C2L-03	2013-C2L-03-(0-0.5)	600-85318-33	2014-01-09	NA	12.2	0.651	79.5	< 0.330 U	REPORT ARSENIC AND SELENIUM
D-12A	D12A (0-0.5)	600-85318-31	2014-01-09	NA	10.9	0.652 b	80.2	< 0.324 U	REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se
MW-41	MW-41 (0.5-2)	600-85318-18	2014-01-08	NA	10.1	0.810	92.5	< 0.338 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-41	MW-41 (0-0.5)	600-85318-17	2014-01-08	NA	8.00	0.474	18.4	< 0.323 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	DUP-6	600-85318-21	2014-01-08	NA	7.39	0.385	15.0	< 0.311 U	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.
MW-42	MW-42 (0-0.5)	600-85318-19	2014-01-08	NA	14.2	1.56	230	0.580 J	REPORT ARSENIC AND SELENIUM REV 4 (3/18) reports Cd, Pb only. Report da reported As, Cd, Pb, Se.

**600-85473 REVISIONS**

2013-NT-01	2013-NT-01 (0.2-2)	600-85473-21	2014-01-10	NA	14.4	0.618	18.5	0.546 J	Report from 1/22 has results for As and Se. only lists Pb and Cd, 4/21 only lists Cd and F
2013-NT-01	2013-NT-01 (0-0.5)	600-85473-20	2014-01-10	NA	15.9	0.571	19.5	< 0.328 U	REPORT ARSENIC AND SELENIUM , also ple interval to "0.5-2" instead of "0.2-2". Report from 1/22 reports As and Se. Rev 3 4/21 does not.
2013-NT-02	2013-NT-02 (0.5-2)	600-85473-24	2014-01-10	NA	14.1	0.354	21.2	0.324 J	REPORT ARSENIC AND SELENIUM Report from 1/22 reports As and Se. Rev 3 4/21 does not.
2013-NT-02	2013-NT-02 (0-0.5)	600-85473-23	2014-01-10	NA	14.9	4.89	837	0.654 J	REPORT ARSENIC AND SELENIUM Report from 1/22 reports As and Se. Rev 3 4/21 does not.

**600-85389 REVISION**

2013-WMU14-1A (5-7)	600-85389-12	1/9/2014	na	na	5.14 J	17000	na	REPORT CADMIUM (confirm Cd concentratio
DUP-7	600-85389-14	1/9/2014	na	na	na	10500	na	REPORT CADMIUM (if 85389-12 is confirmed

Christina Higginbotham, P.G. | Remediation Project Manager | Golder Associates Inc.

500 Century Plaza Drive, Suite 190, Houston, Texas, USA 77073

T: +1 (281) 821-6868 | F: +1 (281) 821-6870 | C: +1 (281) 620-7835 | E: [CHigginbotham@golder.com](mailto:CHigginbotham@golder.com) | [www.golder.com](http://www.golder.com)

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## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-85318-1

Login Number: 85318

List Number: 1

Creator: Lopez, Sandro R

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	3.9/3.0
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.	False	Refer to Job Narrative for details.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Houston

6310 Rothway Street

Houston, TX 77040

Tel: (713)690-4444

TestAmerica Job ID: 600-85318-2

Client Project/Site: Exide Recycling Center

Revision: 1

For:

Golder Associates Inc.

500 Century Plaza Drive

Suite 190

Houston, Texas 77073

Attn: Christina Higginbotham



Authorized for release by:

6/8/2015 3:27:13 PM

Cathy Upton, Project Manager I

(713)690-4444

[cathy.upton@testamericainc.com](mailto:cathy.upton@testamericainc.com)

### LINKS

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results through

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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.

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## Appendix A

### Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-85318-2 and consists of:

- ☒ R1 - Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
  - a. Items consistent with NELAC Chapter 5,
  - b. dilution factors,
  - c. preparation methods,
  - d. cleanup methods, and
  - e. if required for the project, tentatively identified compounds (TICs).
- ☐ R4 - Surrogate recovery data including:
  - a. Calculated recovery (%R), and
  - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☐ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
  - a. LCS spiking amounts,
  - b. Calculated %R for each analyte, and
  - c. The laboratory's LCS QC limits.
- ☐ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a. Samples associated with the MS/MSD clearly identified,
  - b. MS/MSD spiking amounts,
  - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d. Calculated %Rs and relative percent differences (RPDs), and
  - e. The laboratory's MS/MSD QC limits
- ☐ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
  - a. The amount of analyte measured in the duplicate,
  - b. The calculated RPD, and
  - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- ☒ R10 - Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Cathy Upton

Name (printed)



Signature

2/27/2014

Date

Project Management Asst II

Official Title (printed)

# Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	2/27/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-2
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>Chain-of-custody (C-O-C)</b>					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>Sample and quality control (QC) identification</b>					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test reports</b>					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?	X				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	<b>Surrogate recovery data</b>					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test reports/summary forms for blank samples</b>					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	<b>Laboratory control samples (LCS):</b>					
		Were all COCs included in the LCS?			X		
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?			X		
		Were LCSs analyzed at the required frequency?			X		
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?			X		
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?			X		
		Was the LCSD RPD within QC limits?			X		
R7	OI	<b>Matrix spike (MS) and matrix spike duplicate (MSD) data</b>					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	<b>Analytical duplicate data</b>					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	<b>Method quantitation limits (MQLs):</b>					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other problems/anomalies</b>					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
3. NA = Not applicable;
4. NR = Not reviewed;
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

# Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	2/27/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-2
Reviewer Name:	Cathy Upton		

# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial calibration (ICAL)</b>					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):</b>					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass spectral tuning</b>					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	<b>Internal standards (IS)</b>					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	<b>Raw data (NELAC Section 5.5.10)</b>					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual column confirmation</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively identified compounds (TICs)</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) results</b>					
		Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial dilutions, post digestion spikes, and method of standard additions</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	<b>Method detection limit (MDL) studies</b>					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSS?	X				
S11	OI	<b>Proficiency test reports</b>					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards documentation</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/analyte identification procedures</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of analyst competency (DOC)</b>					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/validation documentation for methods (NELAC Chapter 5)</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory standard operating procedures (SOPs)</b>					
		Are laboratory SOPs current and on file for each method performed?	X				
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period. 2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable); 3. NA = Not applicable; 4. NR = Not reviewed; 5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).							

# Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	2/27/2014
Project Name:	Exide Recycling Center	Laboratory Job Number:	600-85318-2
Reviewer Name:	Cathy Upton		

ER # <sup>1</sup>	Description
R01A	<p>The following sample(s) was listed on the Chain of Custody (COC); however, no sample(s) was received: . MW-27C(0-2) AND 2013-BSA-2A-(0-2) WERE NOT RECEIVED.</p> <p>The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): EXTRA SAMPLES: 2013-AD-03-(0-0.5): 1-4oz jar 2013-AD-03-(0.5-2): 1-4oz jar 2013-AD-03-(2-4): 1-4oz jar</p> <p>JX: 2- 4oz jars 2- 2oz jars</p>
	<ol style="list-style-type: none"> <li>Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.</li> <li>O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</li> <li>NA = Not applicable;</li> <li>NR = Not reviewed;</li> <li>ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</li> </ol>

### Detection Check Standard

Matrix: Soil  
Method: 6010B  
Preparation: 3050  
Date Analyzed: 12/30/2013  
Date Prepared: 12/27/2013  
Instrument: Thermo 6500  
TALS Batches: 123949, 123775p  
Prep/Reagent Factor = 50  
Units: mg/kg

Analyte	MDL	DCS Spike	Measured Result	MQL
Aluminum	0.299654	0.5	0.36	25
Antimony	0.231553	0.45	0.5	2.5
Arsenic	0.217923	0.5	0.53	1
Barium	0.011322	0.03	0.04	1
Beryllium	0.014513	0.02	0.015	0.25
Boron	0.385535	0.6	0.56	20
Cadmium	0.025642	0.05	0.05	0.25
Calcium	0.86399	1.5	2.185	100
Chromium	0.050606	0.1	0.135	0.5
Cobalt	0.067622	0.1	0.09	0.5
Copper	0.173703	0.5	0.64	0.5
Iron	2.534007	4	3.76	20
Lead	0.104832	0.2	0.215	0.5
Selenium	0.258884	0.5	0.465	2
Manganese	0.038111	0.05	0.085	1.5
Molybdenum	0.136448	0.35	0.38	0.5
Nickel	0.116599	0.15	0.2	1
Silver	0.118848	0.2	0.15	0.5
Sodium	0.885548	2.4	3.135	100
Thallium	0.276988	0.7	0.73	1.5
Tin	0.08729	0.15	0.19	1
Titanium	0.014529	0.03	0.01	0.5
Vanadium	0.079068	0.15	0.125	0.5
Zinc	0.108432	0.2	0.305	1.5



## Case Narrative

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

**Job ID: 600-85318-2**

**Laboratory: TestAmerica Houston**

### Narrative

#### Job Narrative 600-85318-2

### Comments

The report was revised on 06/08/15 to include Arsenic in sample 25, replacing the final report generated on 02/27/14.

### Receipt

The samples were received on 1/10/2014 10:31 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0° C and 3.9° C.

Except:

The following sample(s) was listed on the Chain of Custody (COC); however, no sample(s) was received: .  
MW-27C(0-2) AND 2013-BSA-2A-(0-2) WERE NOT RECEIVED.

The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC):

EXTRA SAMPLES:

2013-AD-03-(0-0.5): 1-4oz jar

2013-AD-03-(0.5-2): 1-4oz jar

2013-AD-03-(2-4): 1-4oz jar

JX:

2- 4oz jars

2- 2oz jars

## Method Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL HOU
Moisture	Percent Moisture	EPA	TAL HOU

### Protocol References:

EPA = US Environmental Protection Agency

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

### Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

## Sample Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-85318-5	2013-MB-3 (1.25-2)	Solid	01/08/14 12:22	01/10/14 10:31
600-85318-9	2013-MB-5 (14-16)	Solid	01/08/14 13:45	01/10/14 10:31
600-85318-15	MW-27D (2-4)	Solid	01/08/14 15:50	01/10/14 10:31
600-85318-25	MW-27B (2-4)	Solid	01/09/14 09:00	01/10/14 10:31
600-85318-27	MW-27A (2-4)	Solid	01/09/14 09:30	01/10/14 10:31
600-85318-28	2013-NDA-1A(2-4)	Solid	01/09/14 10:15	01/10/14 10:31

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

## Client Sample ID: 2013-MB-3 (1.25-2)

Date Collected: 01/08/14 12:22

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-5

Matrix: Solid

Percent Solids: 76.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.489		0.322	0.0330	mg/Kg	☼	02/20/14 17:00	02/21/14 14:03	1
Lead	157		0.644	0.135	mg/Kg	☼	02/20/14 17:00	02/21/14 14:03	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	23	H	1.0	1.0	%	—		02/25/14 13:53	1
Percent Solids	77	H	1.0	1.0	%	—		02/25/14 13:53	1

## Client Sample ID: 2013-MB-5 (14-16)

Date Collected: 01/08/14 13:45

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-9

Matrix: Solid

Percent Solids: 78.9

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.162	J	0.311	0.0319	mg/Kg	☼	02/19/14 14:02	02/20/14 11:34	1
Lead	13.3		0.621	0.130	mg/Kg	☼	02/19/14 14:02	02/20/14 11:34	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21	H	1.0	1.0	%	—		02/19/14 13:24	1
Percent Solids	79	H	1.0	1.0	%	—		02/19/14 13:24	1

## Client Sample ID: MW-27D (2-4)

Date Collected: 01/08/14 15:50

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-15

Matrix: Solid

Percent Solids: 77.5

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	3.51		0.296	0.0303	mg/Kg	☼	02/19/14 14:02	02/20/14 11:36	1
Lead	1530		0.592	0.124	mg/Kg	☼	02/19/14 14:02	02/20/14 11:36	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22	H	1.0	1.0	%	—		02/19/14 13:24	1
Percent Solids	78	H	1.0	1.0	%	—		02/19/14 13:24	1

## Client Sample ID: MW-27B (2-4)

Date Collected: 01/09/14 09:00

Date Received: 01/10/14 10:31

## Lab Sample ID: 600-85318-25

Matrix: Solid

Percent Solids: 82.3

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11.9		1.16	0.252	mg/Kg	☼	02/19/14 14:02	02/20/14 11:39	1
Cadmium	0.480		0.289	0.0297	mg/Kg	☼	02/19/14 14:02	02/20/14 11:39	1
Lead	27.6		0.578	0.121	mg/Kg	☼	02/19/14 14:02	02/20/14 11:39	1

### General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18	H	1.0	1.0	%	—		02/19/14 13:24	1
Percent Solids	82	H	1.0	1.0	%	—		02/19/14 13:24	1

TestAmerica Houston

# Client Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

**Client Sample ID: MW-27A (2-4)**

**Date Collected: 01/09/14 09:30**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-27**

**Matrix: Solid**

**Percent Solids: 81.6**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.547		0.297	0.0305	mg/Kg	☼	02/20/14 17:00	02/21/14 14:05	1
Lead	51.9		0.595	0.125	mg/Kg	☼	02/20/14 17:00	02/21/14 14:05	1

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18	H	1.0	1.0	%			02/19/14 13:24	1
Percent Solids	82	H	1.0	1.0	%			02/19/14 13:24	1

**Client Sample ID: 2013-NDA-1A(2-4)**

**Date Collected: 01/09/14 10:15**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-28**

**Matrix: Solid**

**Percent Solids: 81.6**

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

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	4.32		0.303	0.0311	mg/Kg	☼	02/19/14 14:02	02/20/14 10:21	1
Lead	946		0.607	0.127	mg/Kg	☼	02/19/14 14:02	02/20/14 10:21	1

**General Chemistry**

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18	H	1.0	1.0	%			02/20/14 13:42	1
Percent Solids	82	H	1.0	1.0	%			02/20/14 13:42	1

## Definitions/Glossary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

### Qualifiers

#### Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
U	Analyte was not detected at or above the SDL.

#### General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

### 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
CFL	Contains Free Liquid
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)

# QC Sample Results

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 600-127709/1-A  
Matrix: Solid  
Analysis Batch: 127767

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 127709

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		02/19/14 14:02	02/20/14 10:09	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		02/19/14 14:02	02/20/14 10:09	1
Lead	0.105	U	0.500	0.105	mg/Kg		02/19/14 14:02	02/20/14 10:09	1

Lab Sample ID: LCSSRM 600-127709/2-A  
Matrix: Solid  
Analysis Batch: 127767

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 127709

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Arsenic	99.6	100.5		mg/Kg		100.9	80.8 - 119.5
Cadmium	182	196.5		mg/Kg		108.0	81.9 - 118.1
Lead	115	116.8		mg/Kg		101.6	81.8 - 119.1
Selenium	150	151.9		mg/Kg		101.3	77.3 - 122.7

Lab Sample ID: MB 600-127810/1-A  
Matrix: Solid  
Analysis Batch: 127873

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 127810

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.218	U	1.00	0.218	mg/Kg		02/20/14 17:00	02/21/14 13:27	1
Cadmium	0.0256	U	0.250	0.0256	mg/Kg		02/20/14 17:00	02/21/14 13:27	1
Lead	0.105	U	0.500	0.105	mg/Kg		02/20/14 17:00	02/21/14 13:27	1

Lab Sample ID: LCSSRM 600-127810/2-A  
Matrix: Solid  
Analysis Batch: 127873

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 127810

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Arsenic	99.6	99.77		mg/Kg		100.2	80.8 - 119.5
Cadmium	182	188.2		mg/Kg		103.4	81.9 - 118.1
Lead	115	116.7		mg/Kg		101.5	81.8 - 119.1
Selenium	150	152.7		mg/Kg		101.8	77.3 - 122.7

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## Unadjusted Detection Limits

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

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

Analyte	MQL	MDL	Units	Method
Arsenic	1.00	0.218	mg/Kg	6010B
Cadmium	0.250	0.0256	mg/Kg	6010B
Lead	0.500	0.105	mg/Kg	6010B

### General Chemistry

Analyte	MQL	MDL	Units	Method
Percent Moisture	1.0	1.0	%	Moisture
Percent Solids	1.0	1.0	%	Moisture

# QC Association Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

## Metals

### Prep Batch: 127709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-9	2013-MB-5 (14-16)	Total/NA	Solid	3050B	
600-85318-15	MW-27D (2-4)	Total/NA	Solid	3050B	
600-85318-25	MW-27B (2-4)	Total/NA	Solid	3050B	
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	3050B	
LCSSRM 600-127709/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-127709/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 127767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-9	2013-MB-5 (14-16)	Total/NA	Solid	6010B	127709
600-85318-15	MW-27D (2-4)	Total/NA	Solid	6010B	127709
600-85318-25	MW-27B (2-4)	Total/NA	Solid	6010B	127709
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	6010B	127709
LCSSRM 600-127709/2-A	Lab Control Sample	Total/NA	Solid	6010B	127709
MB 600-127709/1-A	Method Blank	Total/NA	Solid	6010B	127709

### Prep Batch: 127810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-5	2013-MB-3 (1.25-2)	Total/NA	Solid	3050B	
600-85318-27	MW-27A (2-4)	Total/NA	Solid	3050B	
LCSSRM 600-127810/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 600-127810/1-A	Method Blank	Total/NA	Solid	3050B	

### Analysis Batch: 127873

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-5	2013-MB-3 (1.25-2)	Total/NA	Solid	6010B	127810
600-85318-27	MW-27A (2-4)	Total/NA	Solid	6010B	127810
LCSSRM 600-127810/2-A	Lab Control Sample	Total/NA	Solid	6010B	127810
MB 600-127810/1-A	Method Blank	Total/NA	Solid	6010B	127810

## General Chemistry

### Analysis Batch: 127707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-9	2013-MB-5 (14-16)	Total/NA	Solid	Moisture	
600-85318-15	MW-27D (2-4)	Total/NA	Solid	Moisture	
600-85318-25	MW-27B (2-4)	Total/NA	Solid	Moisture	
600-85318-27	MW-27A (2-4)	Total/NA	Solid	Moisture	

### Analysis Batch: 127793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-28	2013-NDA-1A(2-4)	Total/NA	Solid	Moisture	

### Analysis Batch: 128110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-85318-5	2013-MB-3 (1.25-2)	Total/NA	Solid	Moisture	

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

**Client Sample ID: 2013-MB-3 (1.25-2)**

**Date Collected: 01/08/14 12:22**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-5**

**Matrix: Solid**

**Percent Solids: 76.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	127810	02/20/14 17:00	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	127873	02/21/14 14:03	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			128110	02/25/14 13:53	AYS	TAL HOU

**Client Sample ID: 2013-MB-5 (14-16)**

**Date Collected: 01/08/14 13:45**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-9**

**Matrix: Solid**

**Percent Solids: 78.9**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.02 g	50 mL	127709	02/19/14 14:02	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.02 g	50 mL	127767	02/20/14 11:34	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			127707	02/19/14 13:24	AYS	TAL HOU

**Client Sample ID: MW-27D (2-4)**

**Date Collected: 01/08/14 15:50**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-15**

**Matrix: Solid**

**Percent Solids: 77.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.09 g	50 mL	127709	02/19/14 14:02	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.09 g	50 mL	127767	02/20/14 11:36	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			127707	02/19/14 13:24	AYS	TAL HOU

**Client Sample ID: MW-27B (2-4)**

**Date Collected: 01/09/14 09:00**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-25**

**Matrix: Solid**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	50 mL	127709	02/19/14 14:02	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.05 g	50 mL	127767	02/20/14 11:39	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			127707	02/19/14 13:24	AYS	TAL HOU

**Client Sample ID: MW-27A (2-4)**

**Date Collected: 01/09/14 09:30**

**Date Received: 01/10/14 10:31**

**Lab Sample ID: 600-85318-27**

**Matrix: Solid**

**Percent Solids: 81.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.03 g	50 mL	127810	02/20/14 17:00	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.03 g	50 mL	127873	02/21/14 14:05	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			127707	02/19/14 13:24	AYS	TAL HOU

TestAmerica Houston

# Lab Chronicle

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

**Client Sample ID: 2013-NDA-1A(2-4)**

**Lab Sample ID: 600-85318-28**

**Date Collected: 01/09/14 10:15**

**Matrix: Solid**

**Date Received: 01/10/14 10:31**

**Percent Solids: 81.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.01 g	50 mL	127709	02/19/14 14:02	NER	TAL HOU
Total/NA	Analysis	6010B		1	1.01 g	50 mL	127767	02/20/14 10:21	DCL	TAL HOU
Total/NA	Analysis	Moisture		1			127793	02/20/14 13:42	AYS	TAL HOU

## Laboratory References:

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

# Certification Summary

Client: Golder Associates Inc.  
Project/Site: Exide Recycling Center

TestAmerica Job ID: 600-85318-2

## Laboratory: TestAmerica Houston

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0759	08-04-15
Louisiana	NELAP	6	30643	06-30-15 *
Oklahoma	State Program	6	1309	08-31-15
Texas	NELAP	6	T104704223	10-31-15
USDA	Federal		P330-14-00192	06-06-17
Utah	NELAP	8	TX00083	11-30-15

\* Certification renewal pending - certification considered valid.

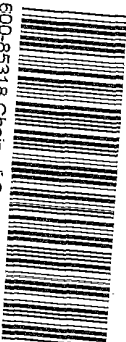
TestAmerica Houston

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain

600-85318 Chain of Custody



<b>Client Information</b>		Sampler: <b>CHARS TAVANO</b>		Lab Piv: <b>Joiner, Dean A</b>		Xing No(s): <b>600-25571-9015.1</b>	
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>817-808-8144</b>		E-Mail: <b>dean.joiner@testamericainc.com</b>		Page: <b>1</b>	
Company: <b>Golder Associates Inc.</b>		Due Date Requested:		Analysis Requested		Job #:	
Address: <b>500 Century Plaza Drive Suite 190</b>		City: <b>Houston</b>		TAT Requested (days): <b>5 WD TRRP</b>		Preservation Codes:	
State, Zip: <b>TX, 77073</b>		PO #:		Purchase Order Requested		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylsulfate U - Acetone V - MCAA W - ph 4.5 Z - other (Specify)	
Phone: <b>281-821-6868(Tel) 281-821-6870(Fax)</b>		Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		Project #:		Other:	
Email: <b>Christina_Higginbotham@golder.com</b>		SSOV#:		Field Filtered Sample (Yes or No)		Total Number of containers	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil, A=air)	Special Instructions/Note:	
2013-FFTA-01 (0-2)	01/08/14	1020	G	Solid		HOLD	
2013-FFTA-02 (2-4)	01/08/14	1030	G	Solid		HOLD	
2013-FFTA-03 (18-19)	01/08/14	1045	G	Solid		HOLD	
2013-MB-3 (0-0.5)	01/08/14	1218	G	Solid		HOLD	
2013-MB-3 (0.5-2)	01/08/14	1222	G	Solid		HOLD	
2013-MB-3 (2-4)	01/08/14	1224	G	Solid		HOLD	
2013-MB-5 (0-5)	01/08/14	1320	G	Solid		HOLD	
2013-MB-5 (10-12)	01/08/14	1335	G	Solid		HOLD	
2013-MB-5 (14-16)	01/08/14	1345	G	Solid		HOLD	
2013-MB-5 (18-20)	01/08/14	1420	G	Solid		HOLD	
2013-MB-4 (0-0.5)	01/08/14	1515	G	Solid		HOLD	
<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>					
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months					
Deleterious Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <b>CHARS TAVANO</b>		Date/Time: <b>01/09/2014 1515</b>		Company: <b>CEP</b>		Received by: <b>McGowan</b>	
Relinquished by: <b>McGowan</b>		Date/Time: <b>1/9/14 1700</b>		Company: <b>AL</b>		Received by: <b>Sheep</b>	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C/F		Other Remarks:	

# Chain of Custody Record

<b>Client Information</b>		Sampler: <b>CHRIS TREWNO</b>		Lab Pmt: <b>Joiner, Dean A</b>		Carrier Tracking No(s):		COC No: <b>600-25671-9015.1</b>	
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>817-808-8444</b>		E-Mail: <b>dean.joiner@testamerica.com</b>				Page: <b>2</b>	
Company: <b>Golder Associates Inc.</b>		Due Date Requested:		Analysis Requested				Job #: <b>1302086</b>	
Address: <b>500 Century Plaza Drive Suite 190</b>		City: <b>Houston</b>		State: <b>TX</b>		Zip: <b>77073</b>		Preservation Codes:	
Phone: <b>281-821-6888(Tel) 281-821-6870(Fax)</b>		PO #: <b>Purchase Order Requested</b>		Matrix (W-water, S-soil, O-others):				A - HCL	
Email: <b>Christina_Higginbotham@golder.com</b>		Project Name: <b>Exide - F2510</b>		Matrix (G-comp, G-grab):				B - NaOH	
Site: <b>Exide - F2510</b>		SSOW#: <b>60004831</b>		Matrix (S-soil, O-others):				C - Zn Acetate	
				Matrix (G-comp, G-grab):				D - Nitric Acid	
				Matrix (S-soil, O-others):				E - NaHSO4	
				Matrix (G-comp, G-grab):				F - MeOH	
				Matrix (S-soil, O-others):				G - Anchor	
				Matrix (G-comp, G-grab):				H - Ascorbic Acid	
				Matrix (S-soil, O-others):				I - Ice	
				Matrix (G-comp, G-grab):				J - DI Water	
				Matrix (S-soil, O-others):				K - EDTA	
				Matrix (G-comp, G-grab):				L - EDA	
				Matrix (S-soil, O-others):				M - Hexane	
				Matrix (G-comp, G-grab):				N - None	
				Matrix (S-soil, O-others):				O - AsNaO2	
				Matrix (G-comp, G-grab):				P - Na2O4S	
				Matrix (S-soil, O-others):				Q - Na2SO3	
				Matrix (G-comp, G-grab):				R - Na2S2O3	
				Matrix (S-soil, O-others):				S - H2SO4	
				Matrix (G-comp, G-grab):				T - TSP Dodecylhydrate	
				Matrix (S-soil, O-others):				U - Acetone	
				Matrix (G-comp, G-grab):				V - MCAA	
				Matrix (S-soil, O-others):				W - pH 4.5	
				Matrix (G-comp, G-grab):				Z - other (Specify)	
<b>Sample Identification</b>		<b>Sample Date</b>		<b>Sample Time</b>		<b>Sample Type (G-comp, G-grab)</b>		<b>Matrix (W-water, S-soil, O-others)</b>	
2013-MB-4 (0.5-2)		01/08/14		1516		G		Solid	
2013-MB-4 (2-4)		01/08/14		1520		G		Solid	
MW-27D (0-2)		01/08/14		1545		G		Solid	
MW-27D (2-4)		01/08/14		1550		G		Solid	
MW-27C (0-2)		01/08/14		1620		G		Solid	
MW-41 (0-0.5)		01/08/14		1340		G		Solid	
MW-41 (0.5-2)		01/08/14		1345		G		Solid	
MW-42 (0-0.5)		01/08/14		1540		G		Solid	
MW-42 (0.5-2)		01/08/14		1545		G		Solid	
MW-42 (0.5-2) MS		01/08/14		1545		G		Solid	
MW-42 (0.5-2) MSD		01/08/14		1546		G		Solid	
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B	
		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological					
<b>Deliverable Requested: I, II, III, IV, Other (Specify)</b>									
<b>Empty Kit Relinquished by:</b>		<b>Date:</b>		<b>Time:</b>		<b>Method of Shipment:</b>			
Relinquished by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/2014 1515</b>		Company: <b>GOLDER</b>		Received by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/14 1515</b>	
Relinquished by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/14 1700</b>		Company: <b>TAL</b>		Received by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/14 1700</b>	
Relinquished by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/14 1700</b>		Company: <b>TAL</b>		Received by: <b>JOHN J. JOHNSON</b>		Date/Time: <b>01/09/14 1700</b>	
<b>Custody Seal Intact:</b>		<b>Custody Seal No.:</b>		<b>Cooler Temperature(s) °C and Other Remarks:</b>					
<input type="checkbox"/> Yes <input type="checkbox"/> No									



**Chain of Custody Record**

<b>Client Information</b>		Sampler: <b>CHRIS REEVE</b>	Lab PWT: <b>Joiner, Dean A</b>	Carrier Tracking No(s):	COC No: <b>600-25571-9015.1</b>
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>817-808-8144</b>	E-Mail: <b>dean.joiner@testamericainc.com</b>		Page: <b>3</b>
Company: <b>Goldier Associates Inc.</b>		Due Date Requested:	Analysis Requested		Job #: <b>1302086</b>
Address: <b>500 Century Plaza Drive Suite 190</b>		TAT Requested (days): <b>5 WD TRRP</b>			
City: <b>Houston</b>					
State, Zip: <b>TX, 77073</b>					
Phone: <b>281-821-6868 (Tel) 281-821-6870 (Fax)</b>		PO #: <b>Purchase Order Requested</b>			
Email: <b>Christina_Higginbotham@golder.com</b>		WFO #:			
Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		Project #: <b>60004831</b>			
Site: <b>EX106 - FASCO</b>		SSOW#:			
<b>Sample Identification</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=Grab, BT=Tissue, Ash)</b>	<b>Matrix (W=Water, S=Solid, O=Organic, In=Inorganic, A=Asphalt)</b>
<b>DUP-6</b>		<b>01/08/14</b>	<b>---</b>	<b>G</b>	<b>Solid</b>
<b>FIELD BLANK</b>		<b>01/08/14</b>	<b>1719</b>	<b>G</b>	<b>Solid</b>
<b>RINSE BLANK - CME</b>		<b>01/09/14</b>	<b>0850</b>	<b>G</b>	<b>Solid</b>
<b>MW-27B (0-2)</b>		<b>01/09/14</b>	<b>0855</b>	<b>G</b>	<b>Solid</b>
<b>MW-27B (2-4)</b>		<b>01/09/14</b>	<b>0900</b>	<b>G</b>	<b>Solid</b>
<b>MW-27A (0-2)</b>		<b>01/09/14</b>	<b>0925</b>	<b>G</b>	<b>Solid</b>
<b>MW-27A (2-4)</b>		<b>01/09/14</b>	<b>0930</b>	<b>G</b>	<b>Solid</b>
<b>2013-NDA-1A (2-4)</b>		<b>01/09/14</b>	<b>1015</b>	<b>G</b>	<b>Solid</b>
<b>E-11C (0-0.5)</b>		<b>01/09/14</b>	<b>1025</b>	<b>G</b>	<b>Solid</b>
<b>D-11A (0-0.5)</b>		<b>01/09/14</b>	<b>1035</b>	<b>G</b>	<b>Solid</b>
<b>D-12A (0-0.5)</b>		<b>01/09/14</b>	<b>1050</b>	<b>G</b>	<b>Solid</b>
<b>Possible Hazard Identification</b>		<b>Sc: type Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
<b>Deliverable Requested: I, II, III, IV, Other (specify)</b>		<b>Special Instructions/QC Requirements:</b>			
<b>Empty Kit Relinquished by:</b>		<b>Date:</b>	<b>Time:</b>	<b>Method of Shipment:</b>	
Relinquished by: <b>JOHN JENSEN</b>		<b>01/29/2014</b>	<b>1515</b>	<b>Company: GOLDIER</b>	
Relinquished by: <b>MACCLOVEN</b>		<b>01/29/14</b>	<b>1700</b>	<b>Company: TX</b>	
Relinquished by:		<b>Date/Time:</b>	<b>Received by:</b>	<b>Date/Time:</b>	<b>Company:</b>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	

# TestAmerica Houston

6310 Rothway Street  
Houston, TX 77040  
Phone (713) 690-4444 Fax (713) 690-5646

## Chain of Custody Record

<b>Client Information</b>		Sampler: <b>CHAS TREWID</b>	Lab PM: <b>Joiner, Dean A</b>	Carrier Tracking No(s):	COC No: <b>600-25571-9015.1</b>														
Client Contact: <b>Christina Higginbotham</b>		Phone: <b>819-808-8144</b>	E-Mail: <b>dean.joiner@testamericainc.com</b>		Page: <b>4</b>														
Company: <b>Golder Associates Inc.</b>					Job #:														
Address: <b>500 Century Plaza Drive Suite 190</b>		Due Date Requested:	<b>Analysis Requested</b>																
City: <b>Houston</b>		TAT Requested (days): <b>5 WD TRRP</b>																	
State, Zip: <b>TX, 77073</b>		PO #:																	
Phone: <b>281-821-6888(Tel) 281-821-6870(Fax)</b>		Purchase Order Requested																	
Email: <b>Christina_Higginbotham@golder.com</b>		Project #:																	
Project Name: <b>Exide Recycling Center, Frisco TX Project</b>		SSOW#:																	
Site: <b>Exide - 72510</b>																			
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab, BR=Resid, A=Air)	Matrix (Water, S-solid, O-liquid, BR=Resid, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - Target Compound List	8270C_LL - (MOD) Target Compound List	8270C_LL - (MOD) PAH List	TX_1005 - Local Method	TX_1006 - Local Method (Hold for TPH 1005 results)	9056_28D - Sulfate	6010B - Cd,Pb	6010B - As,Cd,Pb,Se	Moisture	8082 PCB	Total Number of containers	Special Instructions/Note:
D-13A (0-0.5)	01/09/14	1104	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-CAL-03 (0-0.5)	01/09/14	1126	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-CAL-03 (1-2)	01/09/14	1127	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-CAL-03 (4-5)	01/09/14	1128	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-BAK-2K (0-2)	01/09/14	1250	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-AD-04 (0-0.5)	01/09/14	1326	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-AD-04 (0.5-2)	01/09/14	1327	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
2013-AD-04 (2-4)	01/09/14	1328	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
PUNE BLANK - GEO	01/09/14	0830	G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
TRM BLANK	01/09/14		G	Solid		N	N	N	N	N	N	N	N	N	N	N	N		
<b>Possible Hazard Identification</b>		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)															
Deliverable Requested: I, II, III, IV, Other (specify)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months		Special Instructions/QC Requirements:															
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:															
Relinquished by: <b>JOHN JENSEN</b>	Date/Time: <b>01/09/14 1500</b>	Company: <b>COOPER</b>	Received by: <b>WILLIAMSON</b>	Date/Time: <b>1/9/14 1515</b>	Company: <b>TH</b>														
Relinquished by: <b>MICHAEL JENSEN</b>	Date/Time: <b>1/9/14 1700</b>	Company: <b>TH</b>	Received by: <b>JOHN JENSEN</b>	Date/Time: <b>1/10/14 1631</b>	Company: <b>TH</b>														
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and other Remarks:																	

## Login Sample Receipt Checklist

Client: Golder Associates Inc.

Job Number: 600-85318-2

Login Number: 85318

List Number: 1

Creator: Lopez, Sandro R

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
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	3.9/3.0
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.	False	Refer to Job Narrative for details.
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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