Golder Associates

August 3, 2015 1302086

Matt Love
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2015 SECOND QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Love:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested that monitoring of the FDS be carried out by the facility and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain system.

This report includes general FDS background information and summarizes FDS system operation during the second quarter of 2015. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall and into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc., 2013), the concrete retaining wall along the southern edge of the process area was constructed in the late 1980s to keep floodwaters in Stewart Creek out of the operating portion of the facility, and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plant. Areas of seepage along the Stewart Creek side of the retaining wall were observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected behind the flood wall and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment.

Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) included in Attachment A.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the second quarter of 2015 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and record flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35 and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the second quarter 2015 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the second quarter of 2015 other than described below:

- MW-33 inaccessible for water level measurements at the time of the Second Quarter 2015 inspection as there was a frac tank placed on top of this location.
- Because of the heavy rainfall and associated flooding, it was not possible to pump the French drain for several days in May and June. Measurements from an onsite rain gauge indicate 10.125 inches of rain fell on the facility between May 6th and May 30th, 6.25 inches of which fell on May 29th and May 30th. As a result of this heavy rainfall, the stormwater collected from the former operating area completely filled the stormwater retention pond causing untreated stormwater to back up into the conveyance pipe from the former operating area. This resulted in standing water approximately two feet deep in the general wastewater treatment building and flooding in the surrounding area, including the area of the FDS. Electricity was shut off to the area for safety concerns during this time.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday other than periods when the FDS was not in operation as described above. Table 1 summarizes the recorded flows of the FDS relative and the off-Site daily precipitation based on data recorded at the Frisco, Texas weather station located in Frisco, Texas (data obtained from http://www.friscoweather.com/daily.htm).

As shown in Table 1, the maximum total flow and maximum total precipitation for the quarter occurs concurrently in the month of May.

In addition to the data obtained from the Frisco, Texas weather station (http://www.friscoweather.com/daily.htm), measurements from an onsite rain gauge indicate 10.125 inches of rain fell on the facility between May 6th and May 30th, 6.25 inches of which fell on May 29th and May 30th (as described in the Act of God Letter submitted to TCEQ on June 4, 2015). As noted above, because of the heavy rainfall and associated flooding, it was not possible to pump the French drain for several days in May and June.

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-34, MW-35 and MW-46 were measured and recorded during the second quarter of 2015. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data. Water levels were not measured at MW-33 because the well was covered by a water storage tank at the time of the inspection. In general, water levels were higher during the second quarter of 2015, which is likely a result of the heavy rainfall in the area in May and June 2015 (discussed below).

3.3 Floodwall Seepage

At the time of the wall inspection on June 12, 2015 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition with the exception of one area (described below). Some minor cracks were observed, but were repaired with cement filler by Exide personnel at the time of the Golder inspection. No major cracks were observed.

As described in the letter dated June 12, 2015, RE: Follow-up Written Report Submittal for Telephone Notification Report Number 20152072 (June 12th Letter), an apparent seepage from the floodwall (approximately 40 feet upstream from a stormwater conveyance pipe crossover on Stewart Creek) was observed on June 5, 2015. The seepage close to the flood wall appeared clear and turned white when it came into contact with the creek. As explained in the June 12th letter, an aboveground storage tank (AST) containing a 50% sodium hydroxide solution was not leaking prior to the area being flooded (see description of heavy rainfall in May and June as described above), but was observed to have a small leak when the standing stormwater was removed. Exide suspects that the 50% sodium hydroxide solution may have leaked into the standing stormwater, some of which is suspected to have infiltrated the joints in the concrete wall while this area of the facility was flooded and potentially been released to the banks of Stewart Creek due to water pressure from the standing water on the facility side of the flood wall. As indicated above, the French drain was not being pumped when this portion of the facility was flooded.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on June 12, 2015. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the French Drain system during second quarter 2015. Analytical results from these samples are included in Table 3 and Attachment B.

Exide collected samples where the flood wall seepage ran into Stewart Creek on June 5th, 2015. Those results were previously provided in the June 12th Letter. Golder and the City of Frisco inspected the area of the apparent seepage described above on June 8th and June 9th, 2015. The City of Frisco collected samples of surface water and a solid material from Stewart Creek at the area of the discharge as well as downstream. The City of Frisco results are included in Attachment C. TCEQ performed an inspection of the same areas on June 9, 2015. TCEQ also collected solid material and surface water samples but the TCEQ results have not been provided to Exide and Golder for review. The results from samples collected by the City of Frisco are included in Attachment C.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the second quarter of 2015 described above, the FDS appears to be preventing discharges to Stewart Creek with the exception of the period of time when the system was out of operation during extremely heavy rainfall and there was subsequent flooding in the area of the FDS. This heavy rainfall and flooding are considered an Act of God, as described in the letter from Exide to TCEQ dated June 4, 2015, RE: Notification of Act of God, Exide Technologies, Agreed Order Effective April 27, 2015, TCEQ Docket No. 2013-2207-IHW-E, Registration No. 30516. Following the flooding and observation of the apparent seepage, Exide performed several actions to mitigate and stop the release as detailed in the June 12th Letter.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Anne Faeth-Boyd

Justin C. White, P.E. (Missouri)
Senior Project Engineer

Anne M. Faeth-Boyd, R.G., P.E. (Missouri)
Senior Engineer

Frederick M. Booth, P.G. (Missouri)
Principal and Program Leader

cc:

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Attachment A: French Drain Monitoring Plan

Attachment B: French Drain Water Laboratory Analytical Results

Attachment C: Laboratory Analytical Results provided by the City of Frisco

JCW/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Apr-15			May-15			Jun-15		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
30,393		**7.11**	**31,227**		**16.23**	**28,150**		**2.53**
Date	**Daily Flow (gal)**	**Daily Precip (in)**	**Date**	**Daily Flow (gal)**	**Daily Precip (in)**	**Date**	**Daily Flow (gal)**	**Daily Precip (in)**
4/1/2015	174	0.09	5/1/2015	2,321	0	6/1/2015	0	0
4/2/2015	302	0.06	5/2/2015	0	0	6/2/2015	0	0
4/3/2015	0	0	5/3/2015	0	0	6/3/2015	0	0
4/4/2015	0	0	5/4/2015	7,132	0	6/4/2015	0	0
4/5/2015	0	0.47	5/5/2015	367	0.03	6/5/2015	0	0
4/6/2015	1,905	0.18	5/6/2015	802	0.61	6/6/2015	0	0
4/7/2015	224	0	5/7/2015	591	0.27	6/7/2015	0	0
4/8/2015	174	0	5/8/2015	3,618	1.22	6/8/2015	0	0
4/9/2015	124	0.01	5/9/2015	733	0.37	6/9/2015	4,553	0
4/10/2015	0	0	5/10/2015	0	1.29	6/10/2015	0	0
4/11/2015	0	0	5/11/2015	0	0.58	6/11/2015	0	0
4/12/2015	0	0	5/12/2015	4,688	0.01	6/12/2015	0	0
4/13/2015	3,684	1.44	5/13/2015	784	0.23	6/13/2015	0	0.02
4/14/2015	1,051	0.38	5/14/2015	1,930	0.41	6/14/2015	0	0.04
4/15/2015	530	0	5/15/2015	794	0.01	6/15/2015	6,905	0.07
4/16/2015	400	0	5/16/2015	0	0	6/16/2015	3,129	0.07
4/17/2015	249	0.13	5/17/2015	0	0.71	6/17/2015	1,176	0.96
4/18/2015	0	1.15	5/18/2015	7,467	0.1	6/18/2015	1,800	0.78
4/19/2015	0	0.59	5/19/2015	0	0	6/19/2015	884	0
4/20/2015	5,300	0	5/20/2015	0	0.56	6/20/2015	0	0
4/21/2015	1,819	0.11	5/21/2015	0	0.26	6/21/2015	0	0.12
4/22/2015	127	0.11	5/22/2015	0	0.37	6/22/2015	3,221	0.1
4/23/2015	841	0.54	5/23/2015	0	0.56	6/23/2015	1,064	0
4/24/2015	1,116	0.8	5/24/2015	0	1.99	6/24/2015	220	0
4/25/2015	0	0.68	5/25/2015	0	0.46	6/25/2015	210	0
4/26/2015	0	0	5/26/2015	0	0.27	6/26/2015	209	0.04
4/27/2015	5,087	0.14	5/27/2015	0	0.03	6/27/2015	2,722	0.27
4/28/2015	2,712	0.22	5/28/2015	0	0.05	6/28/2015	0	0
4/29/2015	2,525	0.01	5/29/2015	0	2.92	6/29/2015	1,784	0
4/30/2015	2,049	0	5/30/2015	0	2.18	6/30/2015	273	0.06
			5/31/2015		0.74			

Notes:
Precipitation data obtained from www.friscoweather.com/daily
Daily flow volumes provided by Exide.

Prepared by: EG 7/20/15
Checked by: JS 7/29/15
Reviewed by: AMF/FMB 7/30/15

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.

Prepared by: EG 7/20/15
Checked by: JS 7/29/15
Reviewed by: AMF/FMB 7/30/15

Table 3
French Drain Water
Analytical Data

	Sample ID FD042115-02		**Sample ID** FD042115-01	
	Date Collected 4/21/2015 15:00		**Date Collected** 4/21/2015 15:00	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	0.088	mg/L	NA	mg/L
Arsenic	0.012	mg/L	NA	mg/L
Cadmium	0.0097	mg/L	NA	mg/L
Lead	0.207	mg/L	NA	mg/L
Selenium	0.0208	mg/L	NA	mg/L
Tin	ND	mg/L	NA	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Sulfate	NA	mg/L	1,010	mg/L
Total Dissolved Solids	NA	mg/L	1,780	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected

Prepared by: EG 07/20/15
Checked by: AMF 07/28/15
Reviewed by: AMF/FMB 07/30/15

ATTACHMENT A

FRENCH DRAIN MONITORING PLAN

MONITORING PLAN

EXIDE FRISCO RECYCLING FACILITY

French Drain Monitoring Plan

Submitted To: Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

Submitted By: Golder Associates Inc.
820 S. Main Street, Suite 100
St. Charles, MO 63301 USA

Distribution: Exide Technologies
Golder Associates Inc.

June 2014 **1302086**

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Table of Contents

List of Attachments

1.0 INTRODUCTION

Golder Associates Inc. (Golder) has prepared this Monitoring Plan for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas. The Monitoring Plan has been prepared in response to the Texas Commission on Environmental Quality comments to the Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested that monitoring of the FDS be carried out by the facility. This Monitoring Plan includes general FDS background information and the rationale and methodology that will be used while monitoring the FDS.

1.1 Site History

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc., 2013), the concrete retaining wall along the southern edge of the process area was constructed in the late 1980s to keep floodwaters in Stewart Creek out of the operating portion of the facility, and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plant. Areas of seepage along the Stewart Creek side of the retaining wall were observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected behind the flood wall and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment.

1.2 FDS Construction

FDS construction began in August 2012 and was completed in late November 2012 (W&M Environmental Group, Inc., 2013). The following work was completed:

- Installation of a 4-inch PVC French drain at the base of the retaining wall and a second 4-inch PVC French drain at the base of the retaining wall footing. Each French drain was surrounded by crushed stone and filter fabric.
- The exposed north face of the retaining wall and footing were power washed and treated with an asphaltic waterproofing sealer.
- Installation of a 40 ml HDPE liner on top of the asphaltic waterproofing sealer.
- Installation of a new collection sump for the FDS and another for surface water runoff.
- Installation of chemically resistant waterstops in the French Drain area.

The preceding was an abridged description of construction works completed. The French Drain Construction Report contains additional information, including FDS as-built drawings, and is included as Attachment 1.

2.0 OPERATION INFORMATION

2.1 Purpose

The FDS is designed to intercept perched water from the former operations area, convey the water to the collection manhole, and pump the water to the wastewater treatment system for treatment and proper disposal. Associated asphaltic waterproofing sealants, waterstops and HDPE liners are designed to impede the movement of perched water through the retaining wall prior to collection by the FDS.

2.2 System Specifications

- Pump
  - Flotec Submersible Cast Iron Pump (FPSC3350A)
  - 1/3 horsepower
  - ½-inch solids cap
  - 2,400 gallons per hour at 10 feet of lift
  - 1-1/2 – inch NPT discharge pipe
  - 10 amp draw at full load
  - float set at 10 inches below French Drain inlet pipe invert
- Flow Meter
  - FloMec TM Series – 2-inch
- Average Daily Flow Range
  - flow typically between 50 and 300 gallons per day based on preliminary measurements and is dependent upon precipitation

2.3 Inspections

The following items should be inspected at the prescribed frequency unless observations warrant modifications to the inspection schedule.

2.3.1 Weekday Inspection/Maintenance Items

- Inspect meter to confirm that it is working
- Record flow rate and totalizer reading

2.3.2 Weekly Inspection/Maintenance Items

- Keep the FDS collection sump and pump inlet free of materials that can reduce flow
- The sump outlet should be free draining under normal conditions
- Test the pump float for proper operation

2.3.3 Quarterly Inspection/Maintenance Items

- Measure and record water levels in MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35 and MW-46.
- Inspect FDS sump for sedimentation.

- Inspect Flood Wall Waterstop and Joint Fillers - waterstops and joint fillers should be in good condition.
- Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

3.0 RECORDKEEPING

Surface inlets, junction boxes, manholes, or at the outlet should be monitored for indications of blockages after heavy rains or in the spring when groundwater levels tend to be higher.

A record of inspection forms for site activities will be maintained on site. All water monitoring and system inspection activities will be recorded on an inspection form with the date and time. The identities and affiliations of persons performing the tasks will be included on the inspection forms.

The inspection forms to be used for this project is included as Attachment 2. The inspection forms will be completed by a Site representative on a daily, weekly and quarterly basis as noted above.

ATTACHMENT 1

W&M
ENVIRONMENTAL GROUP, INC.

May 10, 2013

Ms. Vanessa Coleman, Site Manager
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: Wall Seepage Project
Retaining Wall at Stewart Creek
Exide Frisco Recycling Facility
Frisco, Texas
W&M Project No. 112.052

Dear Ms. Coleman:

W&M Environmental Group, Inc. (W&M) conducted an evaluation of water seepage along the concrete retaining wall located on the south boundary of the main operating portion of Exide's Frisco Recycling Center located in Frisco, Texas. A Site Location Plan depicting the principal operating areas of the Exide facility are depicted in **Figure 1**. Based upon this evaluation, recommendations were provided to improve drainage behind the wall and prevent further seepage.

This report briefly summarized the nature of the seepage, the design of the improvements, and their construction in 2012.

BACKGROUND AND PROJECT SCOPE

A concrete retaining wall, or barrier wall, was constructed along the southern edge of the main Exide plant and adjacent to Stewart Creek in the late 1980s. The location of the barrier wall is shown on **Figure 2**. The wall was designed to retain and collect storm water and other water generated from the facility operating areas, where it is pumped into a storm water detention basin. The facility has a permit to treat the water and discharge treated water to the privately-owned treatment works (POTW), as well as a permit to treat the water and discharge treated water to Stewart Creek. Currently, the facility is discharging treated water to the POTW.

Areas of water seepage have been observed along the concrete retaining wall between the main plant and Stewart Creek over time. The area of the wall where seepage has been observed is between the Slag Treatment Building and the Battery Receiving Building. The seepage appears to occur principally at construction or expansion joints, and in some areas is more pronounced than others. In the past, a significant area of seepage was observed adjacent to a concrete sediment pit near the western end of the wall. Seepage in this area was attributed to a leak from the concrete sediment pit, and the pit was plugged and abandoned. Plugging and abandonment of the pit significantly reduced seepage in this area. Additionally, Exide completed repairs and sealed the exterior face of the wall in a number of locations.

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However, seepage continued in some areas and has resulted in spalling and deterioration of the exterior wall face, and localized areas of wet soil and/or small areas of standing water at the exterior base of the wall.

Representatives from the Texas Commission on Environmental Quality (TCEQ) collected soil and water samples during a Site inspection in May 2011 and determined that seepage from the retaining wall may be discharging water containing lead into the soil adjoining Stewart Creek. W&M visited the facility and reviewed plans provided by Exide, and noted that the retaining wall and concrete pavement was designed to convey runoff and other plant water through shallow drainage swales in the concrete pavement, where it is directed to the (now closed) sediment pit. In some areas, the surface of the concrete pavement was deteriorated, cracked or broken, allowing storm water and wash water to potentially infiltrate behind the wall.

W&M reviewed available drawings and plans, and met with facility staff to discuss relevant issues associated with the observed seepage. A subsurface investigation was completed consisting of soil borings and groundwater observation wells behind the wall to document the levels of static groundwater in relation to the elevations of observed seepage. W&M concluded that source(s) of artificial recharge were resulting in saturated fill soils directly behind the retaining wall, including storm water and wash water runoff from operating areas that infiltrates through cracks, joints and areas of deteriorated concrete; and/or leaks from subsurface drains or sumps located within the plant. The layout of the wall and the locations of W&M's observation wells are depicted in **Figure 2.**

W&M recommended that Exide implement the following repairs and upgrades to drainage in the vicinity of the wall:

1. Install a French drain system behind the retaining wall to collect and convey water from the saturated fill away from the wall to a sump or pit, where it can be collected and pumped into the Site's storm water treatment system.
2. The drain should consist of 4-inch diameter perforated pipe surrounded by pervious stone, one at the wall stem and a second at the base of the wall. The pipe and stone should be encased within a porous filter fabric to prevent clayey soils and fines from clogging the drain.
3. The interior face of the retaining wall should be exposed and cleaned, and lined with a heavy duty waterproofing membrane to prevent infiltrating water from reaching the wall, resulting in possible seepage.
4. The concrete paving in areas behind the wall that had deteriorated should be repaired or replaced.

Figures 3 and 4 contain the wall area layout with the proposed design, including the location of the proposed footing drains, location of new drainage sump and manhole, and areas of concrete to be replaced.

IMPLEMENTATION OF WALL DRAINAGE AND CONCRETE IMPROVEMENTS

As part of project design, a test section behind the wall was excavated in September 2011 to observe soil and water conditions and the condition of the inside face of the retaining wall. Photographs from the test section were provided to the contractor to assist with the bidding process.

In January 2012, the contract was awarded to FCS Construction of Frisco, Texas and their subcontractor, Green Scaping, Inc. A Commercial Building Permit Application and a Grading Permit Application were submitted to the City in early 2012, and Commercial Building Permit B12-0977 was issued on April 30, 2012. However, due to scheduling commitments of the contractor once the authorization was received from the City, work did not begin until August 2012.

The principal tasks completed included the following:

- Removal of approximately 8,200 square feet of 6-inch thick concrete along approximately 430 feet of the barrier wall and up to the edges of adjoining structures (building walls, footers, pipe supports).
- Remove the former filled sediment pit at the west end of the project.
- Provide temporary support for power poles and pipe bridge supports during excavation activities.
- Excavation of a trench for the underdrain installation to a depth from 2.5 feet to 4 feet.
- Stockpiling and covering of excavated soil on polyethylene sheeting pending characterization and off-Site disposal.
- Transport and disposal of soils based upon manifests and waste approvals received by Exide.
- Installation of a 4-inch PVC underdrain adjacent to the retaining wall footing and surrounded by crushed stone as shown on the drawings. Where the footing steps down, a second drain was installed at the base of the stem of the retaining wall. The drain and stone were surrounded by porous filter fabric.
- The exposed interior (north) face of the retaining was cleaned by hand of dirt, and power washed, and then the vertical face and the adjoining 2 feet along the top of the footing were treated with an asphaltic waterproofing sealer.
- A 40 ml HDPE liner was placed on top of the asphaltic waterproofing sealer and across the footing. The liner was affixed to the vertical wall face in conjunction with the concrete waterstop fasteners.
- Two new collection sumps were constructed at the west end of the wall, one for the new underdrain system, and a second for surface runoff.
- Replacement of the removed concrete, including installation of chemical resistant waterstops.

CONSTRUCTION

Work was initiated on August 20, 2012 and was completed in late November 2012. All work was performed in Level C personal protective equipment.

Delays were encountered during the conduct of the project for various reasons, principally after heavy rains which saturated the subgrade and prevented construction equipment from moving about. Extreme care was taken to control surface water and divert it to the existing collection point at the west end of the project and minimize any further infiltration in exposed areas after concrete removal.

The project was completed in four segments to allow for competent concrete working surfaces to remain while other areas were being removed for drain installation.

- The first 160-foot section was completed during weeks 1 through 3
- A second section of 115 feet in length was completed during weeks 4 through 9.
- The third section, 90 feet adjacent to an active acid tank, was completed during week 10.

- The final 60-foot section and installation of the new sumps and manhole were completed during weeks 11 and 12.

A representative of W&M was present on-site during all critical stages of the work, including drain installation, wall cleaning, asphaltic membrane and liner application and final manhole placement. Daily and weekly status reports were prepared and submitted to Exide to document the work progress and any issues that had arisen**.** **Figure 5** contains an overview of the progress made during each week of the project. Key photographs taken at various stages are provided in **Attachment A.**

Prior to the initiation of construction, observation wells installed as part of the engineering assessment (designated OW-1, OW-2, OW-3A, OW-3B and OW-4) were plugged and abandoned by a Texas licensed water well driller. Copies of the State of Texas Well Plugging Reports are provided in **Attachment B.**

During certain periods of excavation a representative of Pastor, Behling & Wheeler, LLC (PBW) was on-site to recover samples of soil from the excavation sidewalls and base in accordance with a sampling regimen agreed with the US EPA. Those sampling results were not provided to W&M and are not included herein.

SOIL CHARACTERIZATION and MANAGEMENT

Concrete removed from the drain area was broken into manageable sections and pressure washed at Exide's truck wash pit located adjacent to the work area. The concrete was then placed in an area designated by Exide and managed with other debris generated by the facility.

Excavated soil from the trench was stockpiled on polyethylene and covered each night with polyethylene, and sampled at a frequency of 1 sample per 50 cubic yards for waste characterization purposes. The stockpile waste characterizations samples, designated SP-01 through SP-07, were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals by EPA Method 6020/7470A, pH by Method 9045, and Total Petroleum Hydrocarbons (TPH) by Texas Method TX1005. Copies of the laboratory analytical reports for the stockpile samples are provided in **Attachment C.**

Based upon the waste characterization results, the material was disposed off-Site under manifest to a hazardous or non-hazardous waste landfill. Approximately 258 cubic yards was manifested to Waste management's DFW Landfill in Lewisville, Texas (Permit No. 1025-B) as a Class 2 waste. Approximately 55 cubic yards was determined to be a characteristic waste based upon TCLP data, and was manifested to Chemical Waste Management's hazardous waste disposal facility in Sulphur, Louisiana (EPA ID No. LA0000147272). Manifests for the disposal of all soils from the drain excavation are provided in **Attachment D.**

POST-CONSTRUCTION OBSERVATIONS

W&M visited the wall project on three occasions since the drain was completed to observe the condition of the wall. On each occasion, the entire perimeter of the wall was walked and observed for evidence of ongoing seepage. No evidence of recent seepage has been observed, and the drain and sumps appear to be functioning as designed.

This report was prepared for the sole use of Exide Technologies by employing generally accepted methods and customary practices of the engineering profession. W&M appreciates the opportunity to be of service to you on this project. If you have any questions or need additional information, please contact Frank Clark, P.E. at 972-509-9611.

Very truly yours,
W&M ENVIRONMENTAL GROUP, INC.

Frank W Clark

Frank W. Clark, P.E., P.G.
Senior Consultant

Michael Whitehead

Michael Whitehead
Senior Reviewer

Figures, Tables, Attachments

STATE OF TEXAS
FRANK W. CLARK
82371
LICENSED
PROFESSIONAL ENGINEER

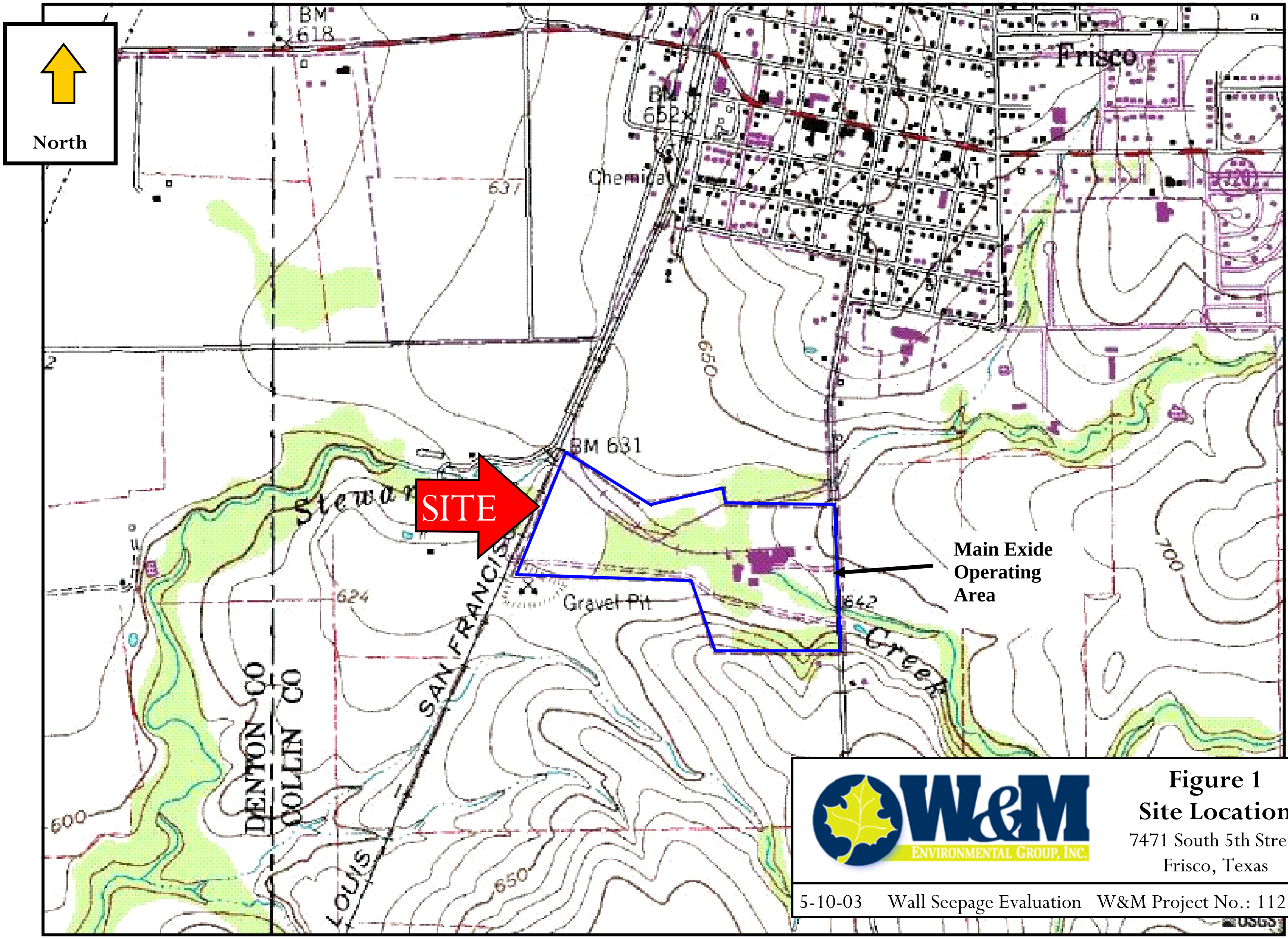
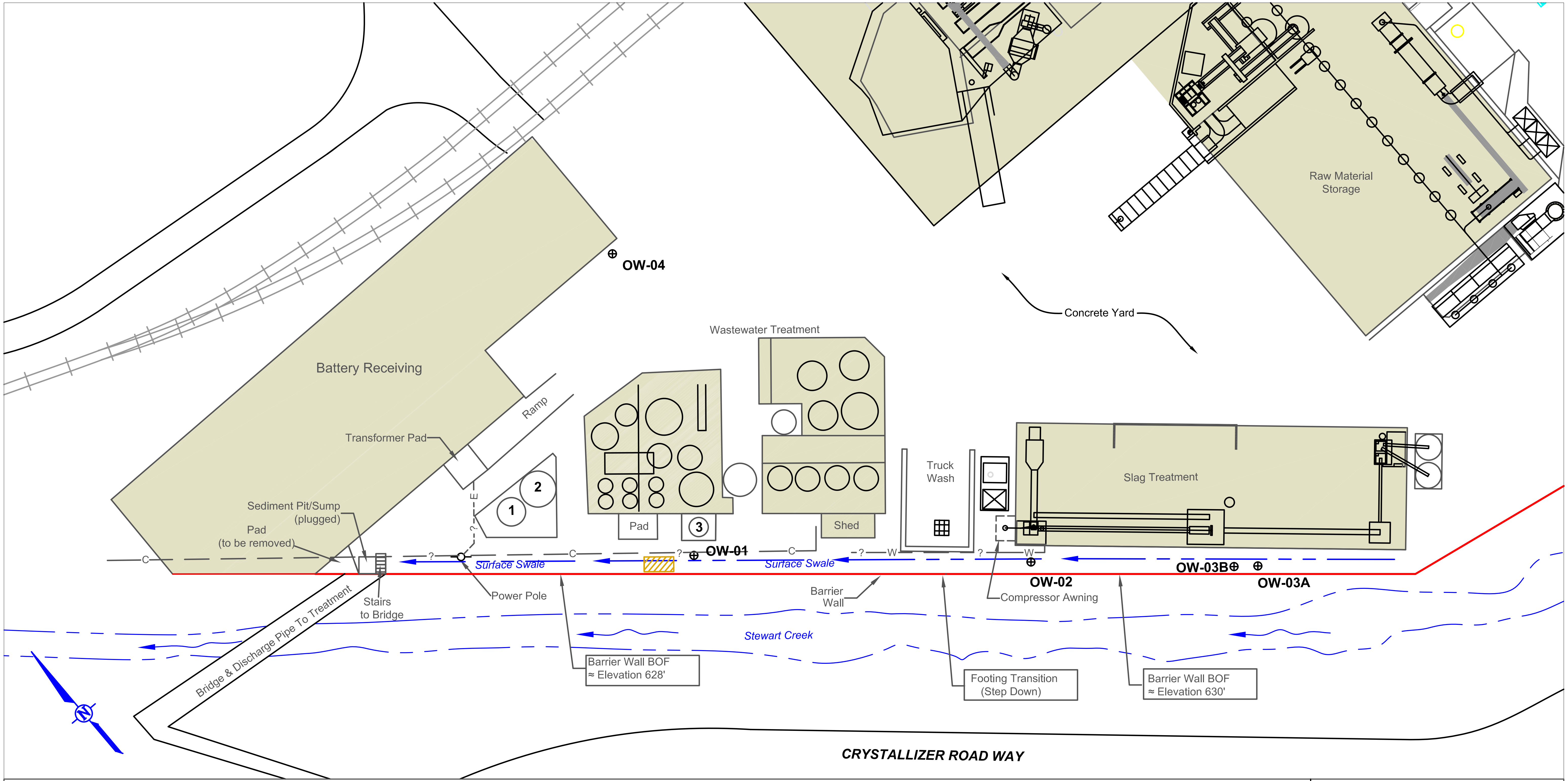


Figure 1
Site Location
7471 South 5th Street
Frisco, Texas

5-10-03 Wall Seepage Evaluation W&M Project No.: 112.052



⊕	Observation Well (to be removed)
▨	Retaining Wall Investigation Area
BOF	Bottom of Footing

ASTs In Work Area

①	Crystallizer Feed
②	Liquid Caustic
③	Sufuric Acid

Underground Utilities (Approximate)

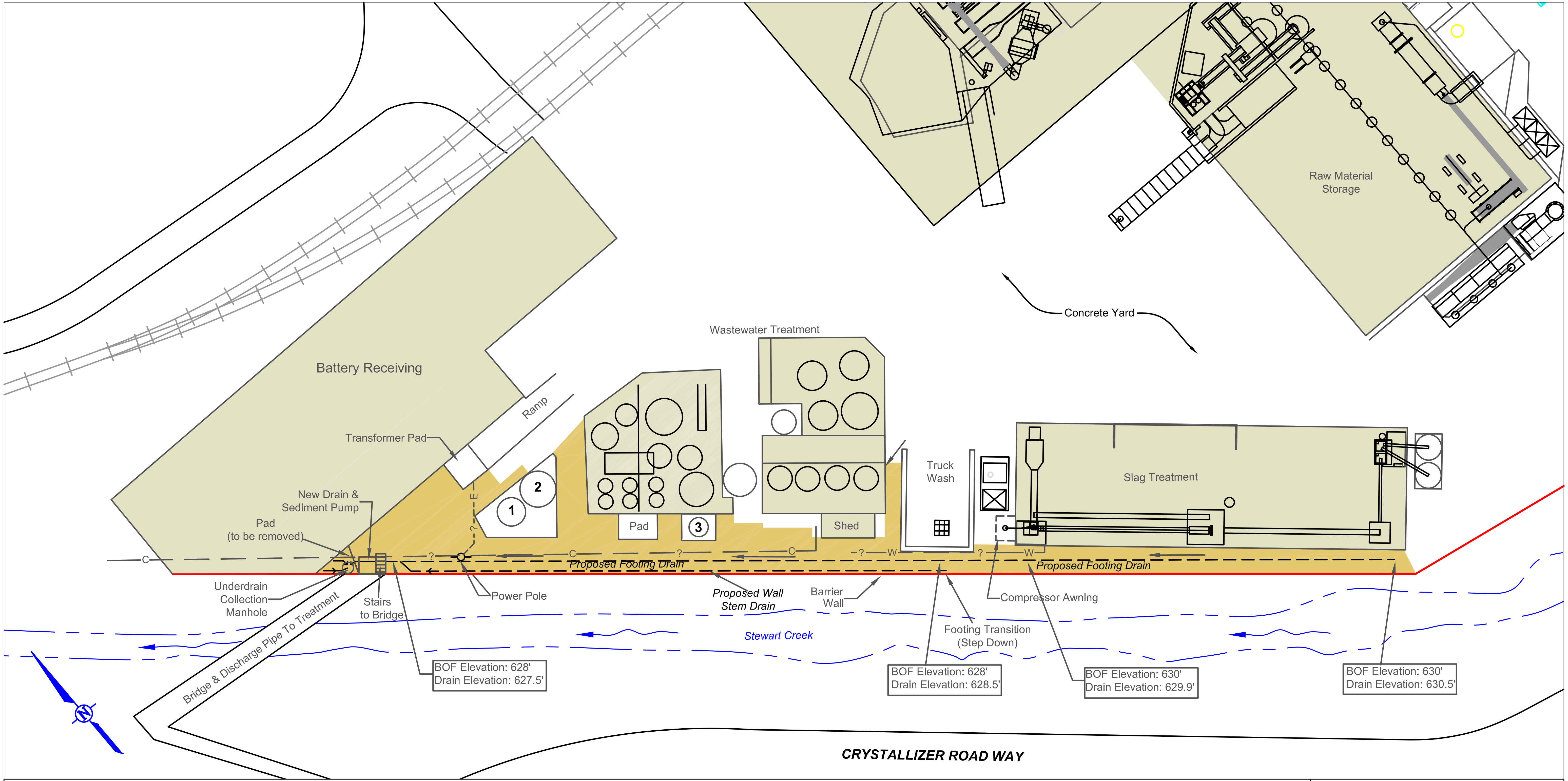
E	Electric
W	Water
C	Condensate Liquid

0' 40' 80'
APPROXIMATE SCALE

Figure 2
General Site Layout
7471 South 5th Street
Frisco, Texas

W&M
ENVIRONMENTAL GROUP, INC.
www.wh-m.com

10/27/11	W&M Project No. 112.052.002	Drawn by: SF



🟨	Areas of Concrete Removal and Replacement
BOF	Bottom of Footing

0' 40' 80'

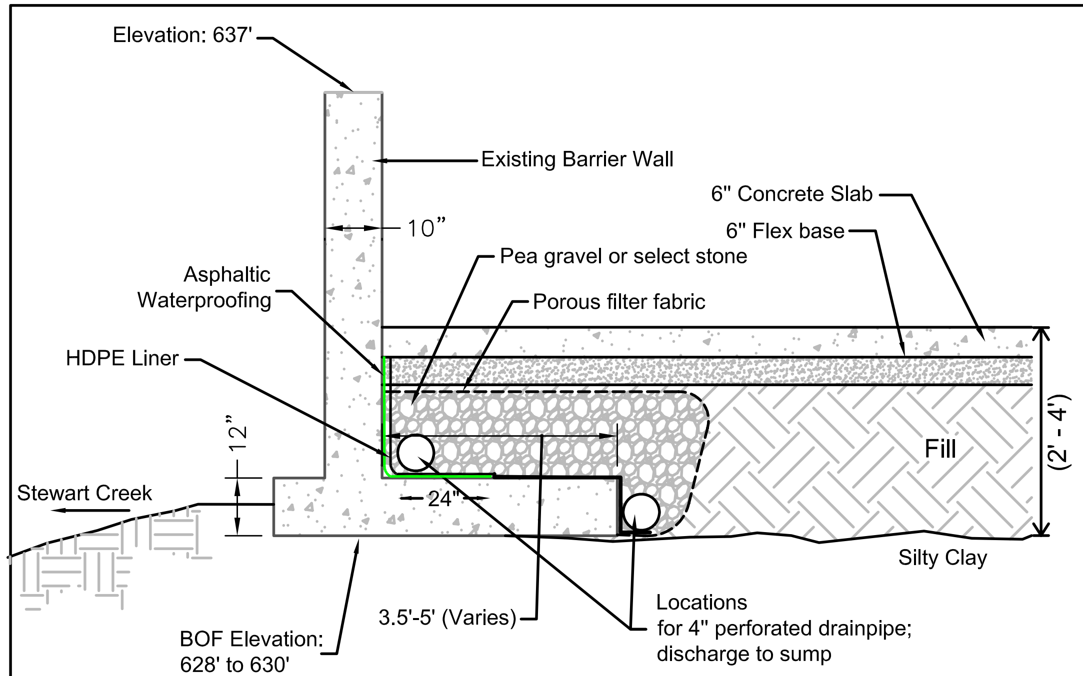
APPROXIMATE SCALE

Figure 3
Wall Drain and Concrete Replacement Areas

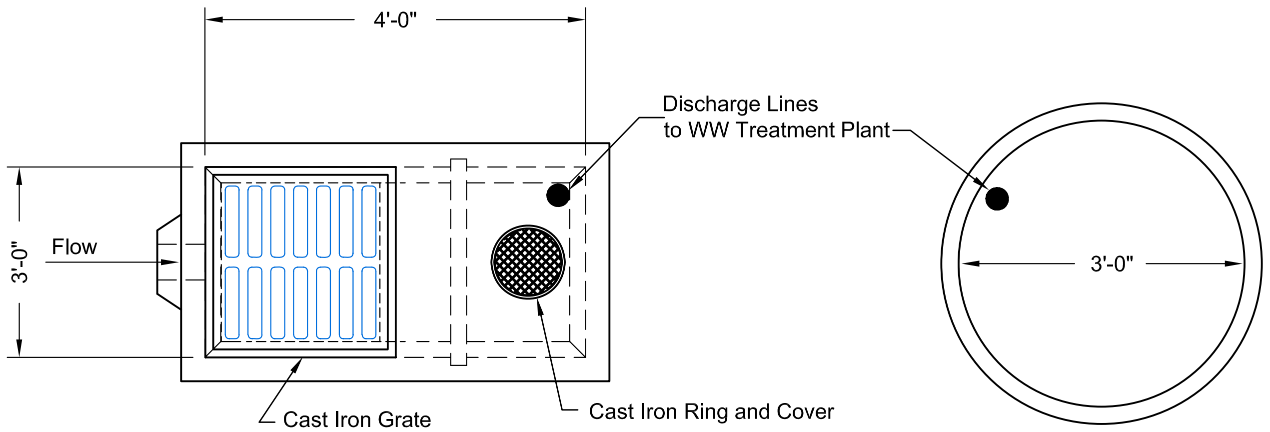
7471 South 5th Street
Frisco, Texas

W&M ENVIRONMENTAL GROUP, INC.
www.wh-m.com

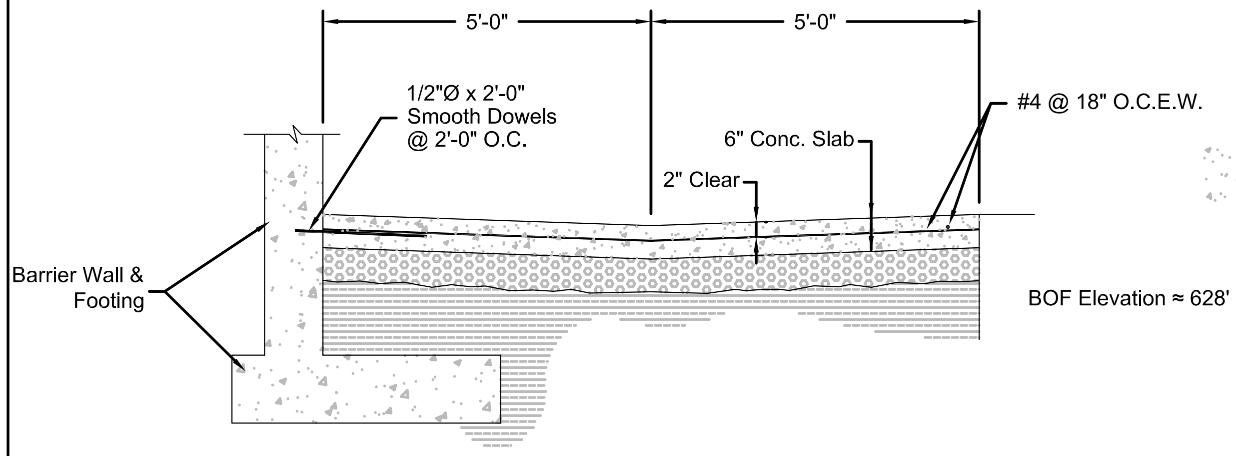
10/27/11 | W&M Project No. 112.052.002 | Drawn by: SF



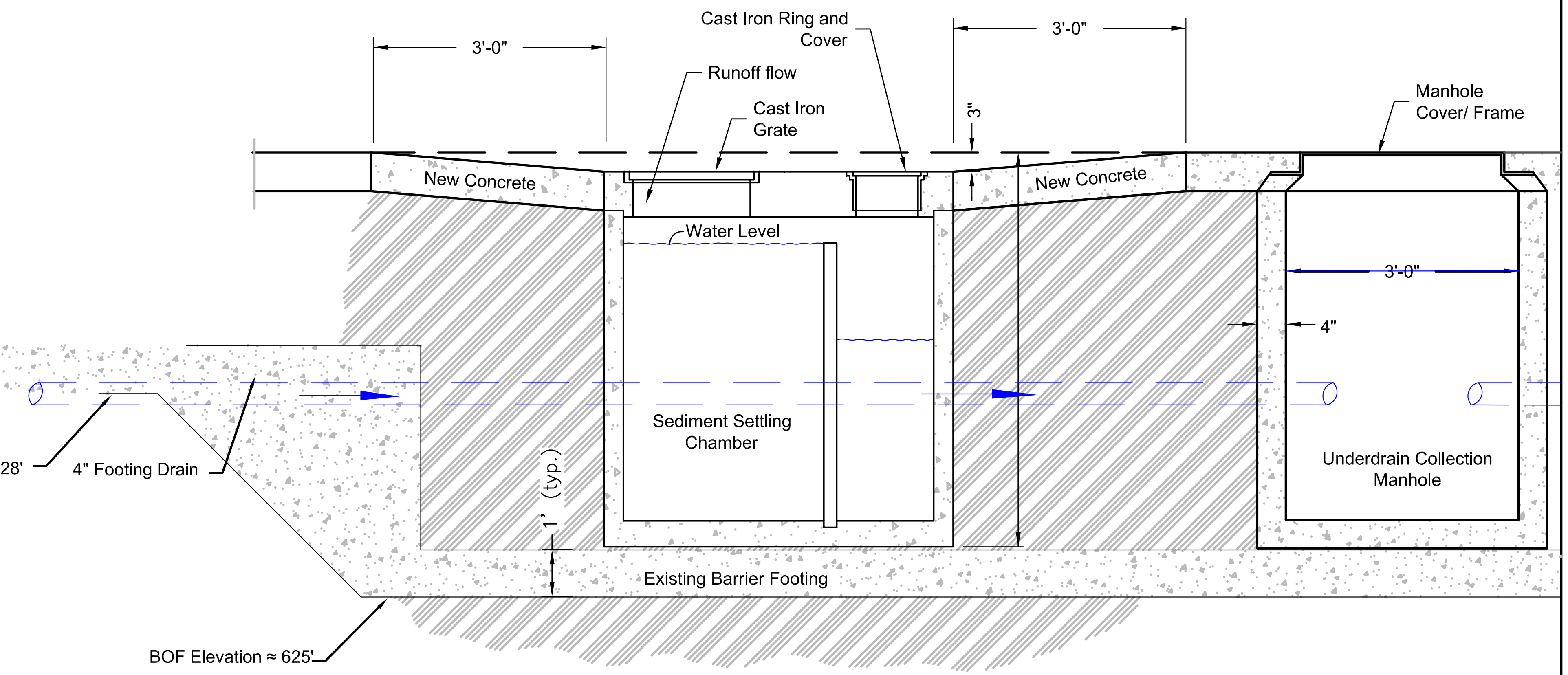
FOOTING DRAIN DETAIL



SUMP DETAIL - PLAN VIEW



DRAINAGE FLUME

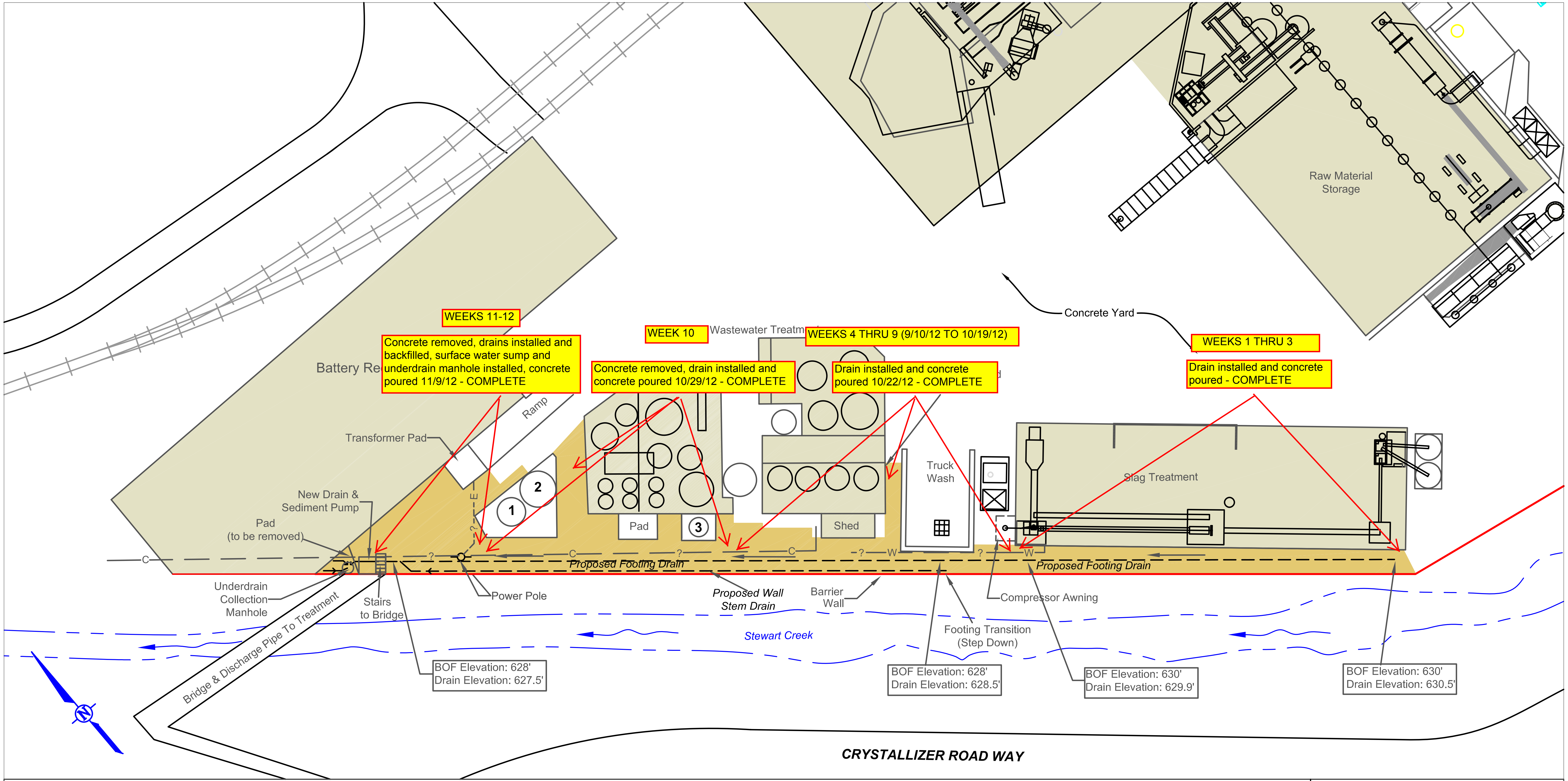


SUMP DETAIL - SIDE VIEW

Figure 4
Detail Sheet
7471 South 5th Street
Frisco, Texas

W&M Environmental Group, Inc.
www.wh-m.com

10/27/11	W&M Project No. 112.052.002	Drawn by: SF



WEEKS 11-12

Concrete removed, drains installed and backfilled, surface water sump and underdrain manhole installed, concrete poured 11/9/12 - COMPLETE

WEEK 10

Concrete removed, drain installed and concrete poured 10/29/12 - COMPLETE

WEEKS 4 THRU 9 (9/10/12 TO 10/19/12)

Drain installed and concrete poured 10/22/12 - COMPLETE

WEEKS 1 THRU 3

Drain installed and concrete poured - COMPLETE

BOF Elevation: 628'
Drain Elevation: 627.5'

BOF Elevation: 628'
Drain Elevation: 628.5'

BOF Elevation: 630'
Drain Elevation: 629.9'

BOF Elevation: 630'
Drain Elevation: 630.5'

🟨 Areas of Concrete Removal and Replacement

BOF Bottom of Footing

0' 40' 80'
APPROXIMATE SCALE

FIGURE 5

Wall Drain and Concrete Replacement Areas

7471 South 5th Street
Frisco, Texas

W&M ENVIRONMENTAL GROUP, INC.
www.wh-m.com

10/27/11	W&M Project No. 112.052.002	Drawn by: SF

PHOTOGRAPHIC LOG

ATTACHMENT A

Photo 1: View of area of seepage along exterior face of retaining wall; note staining of caulking and cracks in concrete wall footing.

Photo 2: Area of moist soils near area of seep in wall.

Attachment A
Photographic Log
Retaining Wall Project
Frisco, Texas

5/1/2013 W&M Project No.: 112.052

Photo 3: Pre-repair—deteriorated concrete pavement and standing water along retaining wall.

Photo 4: Deteriorated concrete and drainage swale that conveys water to sediment pit.

Photo 5: Breaking of concrete in first section, east end of project area..

Photo 6: Pressure washing of concrete prior to removal and disposal.

Photo 7: Exposed soil and back of retaining wall footing.

Photo 8: Trench at wall footing prior to installation of drain.

Photo 9: Applying liquid asphaltic membrane to wall and top of footing.

Photo 10: Installing filter fabric for footing drain.

Photo 11: Re-bar installed on flex base awaiting concrete.

Photo 12: Finishing new concrete paved surface and swale.

Photo 13: Broken concrete from second section .

Photo 14: Exposed footing at step-down section.

Photo 15: Exposed wall and footing near truck wash.

Photo 16: Applying liquid asphaltic membrane to wall stem and footer.

Photo 17: Heat weld of HDPE liner against wall.

Photo 18: Installed liner prior to drain pipe and anchoring to wall.

Photo 19: Detail of water stops.

Photo 20: Second section prior to placement of steel.

Photo 21: Water stop detail at corner.

Photo 22: Excavating third section of drain.

Photo 23: Exposed wall and drain trench prior to membrane and pipe.

Photo 24: Support for power pole near trench, west end of project.

Photo 25: View of stem drain and footing drain installation prior to backfilling.

Photo 26: Stockpiled excavated soil prior to off-site disposal

Photo 27: Finished concrete near acid tank.

Photo 28: Former sump area, infilled with concrete.

Photo 29: Applying liquid asphaltic membrane at far west end of project.

Photo 30: Installation of sump for surface drainage

Attachment A
Photographic Log
Retaining Wall Seepage
Frisco, Texas

6/23/2009 Slag Sampling W&M Project No.: 112.052

Photo 31: Sump and underdrain manhole after backfilling

Photo 32: Finishing concrete surfacing at far west end of project.

WATER WELL PLUGGING REPORTS

ATTACHMENT B

STATE OF TEXAS PLUGGING REPORT for Tracking #79663

Owner: **EXIDE TECHNOLOGIES**

Address: **7471 SOUTH 5TH**
FRISCO , TX 75034

Well Location: **7471 SOUTH 5TH**
FRISCO , TX 75034

Well County: **Collin**

Owner Well #: **OW-01,02,03B**

Grid #: **18-50-8**

Latitude: **33° 08' 29" N**

Longitude: **096° 49' 41" W**

GPS Brand Used: **GARMIN**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller: **DARRIN S. STARK SR**

Driller's License Number of Original Well Driller: **54891**

Date Well Drilled: **6/10/2011**

Well Report Tracking Number: **258277**

Diameter of Borehole: **7 inches**

Total Depth of Borehole: **5 feet**

Date Well Plugged: **1/20/2012**

Person Actually Performing Plugging Operation: **DARRIN S. STARK SR.**

License Number of Plugging Operator: **54891**

Plugging Method: **Pour in 3/8 bentonite chips when standing water in well is less than 100 feet in depth, cement top 2 feet.**

Plugging Variance #: **No Data**

Casing Left Data:
1st Interval: **No Data**
2nd Interval: **No Data**
3rd Interval: **No Data**

Cement/Bentonite Plugs Placed in Well:
1st Interval: **From 5 ft to 2 ft; Sack(s)/type of cement used: 1-BENTONITE**
2nd Interval: **From 2 ft to 0 ft; Sack(s)/type of cement used: 1-CEMENT**
3rd Interval: **No Data**
4th Interval: **No Data**
5th Interval: **No Data**

Certification Data: The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information:
RIOMAR ENVIRONMENTAL DRILLING
9213 MONTANA STREET

	JOSHUA , TX 76058
Plug Installer License Number:	**54891**
Licensed Plug Installer Signature:	**DARRIN S. STARK SR.**
Registered Plug Installer Apprentice Signature:	**DERRICK DAMERON**
Apprentice Registration Number:	**57146**
Plugging Method Comments:	**No Data**

Please include the plugging report's tracking number (Tracking **#79663**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #79664

Owner:	**EXIDE TECHNOLOGIES**	Owner Well #:	**OW-04**
Address:	**7471 SOUTH 5TH** **FRISCO , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 SOUTH 5TH** **FRISCO , TX 75034**	Latitude:	**33° 08' 29" N**
Well County:	**Collin**	Longitude:	**096° 49' 41" W**
		GPS Brand Used:	**GARMIN**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**DARRIN S. STARK SR**
Driller's License Number of Original Well Driller:	**54891**
Date Well Drilled:	**6/10/2011**
Well Report Tracking Number:	**258279**
Diameter of Borehole:	**7 inches**
Total Depth of Borehole:	**8 feet**

Date Well Plugged:	**1/20/2012**
Person Actually Performing Plugging Operation:	**DARRIN S. STARK SR.**
License Number of Plugging Operator:	**54891**
Plugging Method:	**Pour in 3/8 bentonite chips when standing water in well is less than 100 feet in depth, cement top 2 feet.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **No Data** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 8 ft to 2 ft; Sack(s)/type of cement used: 1-BENTONITE** 2nd Interval: **From 2 ft to 0 ft; Sack(s)/type of cement used: 1-CEMENT** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**RIOMAR ENVIRONMENTAL DRILLING** **9213 MONTANA STREET**

	JOSHUA , TX 76058
Plug Installer License Number:	**54891**
Licensed Plug Installer Signature:	**DARRIN S. STARK SR.**
Registered Plug Installer Apprentice Signature:	**DERRICK DAMERON**
Apprentice Registration Number:	**57146**
Plugging Method Comments:	**No Data**

Please include the plugging report's tracking number (Tracking **#79664**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

STATE OF TEXAS PLUGGING REPORT for Tracking #79665

Owner:	**EXIDE TECHNOLOGIES**	Owner Well #:	**OW-03A**
Address:	**7471 SOUTH 5TH** **FRISCO , TX 75034**	Grid #:	**18-50-8**
Well Location:	**7471 SOUTH 5TH** **FRISCO , TX 75034**	Latitude:	**33° 08' 29" N**
Well County:	**Collin**	Longitude:	**096° 49' 41" W**
		GPS Brand Used:	**GARMIN**

Well Type: **Monitor**

HISTORICAL DATA ON WELL TO BE PLUGGED

Original Well Driller:	**DARRIN S. STARK SR**
Driller's License Number of Original Well Driller:	**54891**
Date Well Drilled:	**6/10/2011**
Well Report Tracking Number:	**258282**
Diameter of Borehole:	**7 inches**
Total Depth of Borehole:	**20 feet**

Date Well Plugged:	**1/20/2012**
Person Actually Performing Plugging Operation:	**DARRIN S. STARK SR.**
License Number of Plugging Operator:	**54891**
Plugging Method:	**Pour in 3/8 bentonite chips when standing water in well is less than 100 feet in depth, cement top 2 feet.**
Plugging Variance #:	**No Data**
Casing Left Data:	1st Interval: **No Data** 2nd Interval: **No Data** 3rd Interval: **No Data**
Cement/Bentonite Plugs Placed in Well:	1st Interval: **From 20 ft to 2 ft; Sack(s)/type of cement used: 1-BENTONITE** 2nd Interval: **From 2 ft to 0 ft; Sack(s)/type of cement used: 1-CEMENT** 3rd Interval: **No Data** 4th Interval: **No Data** 5th Interval: **No Data**

Certification Data:	The plug installer certified that the plug installer plugged this well (or the well was plugged under the plug installer's direct supervision) and that each and all of the statements herein are true and correct. The plug installer understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.
Company Information:	**RIOMAR ENVIRONMENTAL DRILLING** **9213 MONTANA STREET**

	JOSHUA , TX 76058
Plug Installer License Number:	**54891**
Licensed Plug Installer Signature:	**DARRIN S. STARK SR.**
Registered Plug Installer Apprentice Signature:	**DERRICK DAMERON**
Apprentice Registration Number:	**57146**
Plugging Method Comments:	**No Data**

Please include the plugging report's tracking number (Tracking **#79665**) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

LABORATORY ANALYTICAL REPORTS – STOCKPILE SAMPLES

ATTACHMENT C

OXIDOR Laboratories, LLC

OXIDOR Laboratory Review Checklist Cover Page

Project Name: 112.052.003 Retaining Wall Project Frisco

OXIDOR Job Number: 12080639 Exide Technologies

This data package consists of:

☒ This signature page, the laboratory review checklist, and the following reportable data:

- ☒ **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 TNI Standard Module 2, Section 5.10
  - 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) for each analyte for each method and matrix;
- ☒ **R10** Other problems or anomalies.

☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Charles Brungardt		President	September 4, 2012
Name	Signature	Official Title	Date

Laboratory Review Checklist: Reportable Data

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: September 4, 2012
Project Name: 112.052.003 Retaining Wall Project	Laboratory Job Number: 12080639 Exide Technologies
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		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	**Sample Quality Control (QC) and identification**					
		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	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MDL, 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 quantitation 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		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the required 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	**Laboratory Control Samples (LCS)**					
		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				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data**					
		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	**Analytical duplicate data**					
		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	**Method Quantitation Limits (MQLs)**					
		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 included in the laboratory data package?	X				
		Does the detectability check sample (DCS) data document the laboratory's capability to detect the COCs at the MQL used to calculate the SQLs?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for all analytes, matrices, and methods associated with this LRC?	X				
		Was applicable and available technology used to lower the SQL to minimize any matrix interference effects on the sample results?	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 "No" or "NR" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: OXIDOR Laboratories, LLC
LRC Date: September 4, 2012
Project Name: 112.052.003 Retaining Wall Project
Laboratory Job Number: 12080639 Exide Technologies
Reviewer Name: James A. Narens, III
QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		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	**Initial / continuing calibration verification (ICV / CCV) and continuing calibration blanks (CCB)**					
		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	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal Standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (TNI Standard Module 2, Section 5.10)**					
		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	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results - Metals**					
		Were percent recoveries within the method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions - Metals**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) studies**					
		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	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analysis NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Capability (DOC)**					
		Was DOC conducted consistent with TNI Standard Module 4, Section 1.6?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (TNI Standard Module 4, Section 1.5)**					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		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 "No" or "NR" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: September 4, 2012
Project Name: 112.052.003 Retaining Wall Project	Laboratory Job Number: 12080639 Exide Technologies
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

ER#[1]	DESCRIPTION

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "No" or "NR" is checked on the LRC)

OXIDOR Laboratories, LLC

T104704227-12-7

Tuesday, September 04, 2012

W&M Environmental Group, Inc.
Frank Clark
906 E. 18th, Suite 100
Plano, TX 75074
Tel: (972) 516-0300 Fax: (972) 516-4145

Re: Project Name: Retaining Wall Project
Project Number: 112.052.003
Project Location: Frisco

Oxidor received 1 solid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
12080639-001	SP-01	Solid	8/30/2012 08:30	TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver

Respectfully submitted,

Charles Brungardt
President

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall Project**

Customer Sample ID: **SP-01**
Oxidor Sample ID: 12080639-001
Sample Received: 8/30/2012

Matrix: **Solid**
Sample Collected: **8/30/2012 08:30**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Sample Prep								
TCLP Metals Extraction								
TCLP Extraction					08/30/12 16:00	1311	T.C.	
Metals								
Digested by method 3005A on 08/31/12 at 09:20								
TCLP Antimony	0.05	0.050	**0.065**	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Barium	0.05	0.050	**0.153**	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.073**	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Lead	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	08/31/12 13:08	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	08/31/12 13:08	6020	K.O.	
Digested by method 7470A on 08/31/12 at 09:00								
TCLP Mercury	0.001	0.001	ND	mg/L	08/31/12 16:33	7470A	T.C.	

W&M Environmental Group, Inc.
Frank Clark

Sample Cross Reference

Project Name: **Retaining Wall Project**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
SP-01	12080639-001	TCLP Mercury	7470A	MERC_06623_L
		TCLP Silver	6020	META_05545_L
		TCLP Selenium	6020	META_05545_L
		TCLP Nickel	6020	META_05545_L
		TCLP Lead	6020	META_05545_L
		TCLP Chromium	6020	META_05545_L
		TCLP Cadmium	6020	META_05545_L
		TCLP Berylium	6020	META_05545_L
		TCLP Barium	6020	META_05545_L
		TCLP Arsenic	6020	META_05545_L
		TCLP Antimony	6020	META_05545_L

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall Project**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**MERC_06623_L**								
Blank	TCLP Mercury	ND mg/L							
LCS	TCLP Mercury	0.005 mg/L		0.005 mg/L	104%	85-115%			
LCSD	TCLP Mercury	0.005 mg/L		0.005 mg/L	101%	85-115%	0.5%	0-25%	
MS	TCLP Mercury	0.020 mg/L	ND	0.02 mg/L	99%	80-120%			
MSD	TCLP Mercury	0.021 mg/L	ND	0.02 mg/L	103%	80-120%	2.6%	0-25%	
QCBatchID	**META_05545_L**								
Blank	TCLP Antimony	ND mg/L							
	TCLP Arsenic	ND mg/L							
	TCLP Barium	ND mg/L							
	TCLP Berylium	ND mg/L							
	TCLP Cadmium	ND mg/L							
	TCLP Chromium	ND mg/L							
	TCLP Lead	ND mg/L							
	TCLP Nickel	ND mg/L							
	TCLP Selenium	ND mg/L							
	TCLP Silver	ND mg/L							
LCS	TCLP Antimony	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Arsenic	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Barium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	TCLP Berylium	0.105 mg/L		0.1 mg/L	105%	85-115%			
	TCLP Cadmium	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Chromium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	TCLP Lead	0.099 mg/L		0.1 mg/L	99%	85-115%			
	TCLP Nickel	0.104 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Selenium	0.104 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Silver	0.101 mg/L		0.1 mg/L	101%	85-115%			
LCSD	TCLP Antimony	0.101 mg/L		0.1 mg/L	101%	85-115%	0.4%	0-20%	
	TCLP Arsenic	0.102 mg/L		0.1 mg/L	102%	85-115%	1.0%	0-20%	
	TCLP Barium	0.101 mg/L		0.1 mg/L	101%	85-115%	0.6%	0-20%	
	TCLP Berylium	0.104 mg/L		0.1 mg/L	104%	85-115%	0.9%	0-20%	
	TCLP Cadmium	0.101 mg/L		0.1 mg/L	101%	85-115%	0.5%	0-20%	
	TCLP Chromium	0.102 mg/L		0.1 mg/L	102%	85-115%	0.1%	0-20%	
	TCLP Lead	0.098 mg/L		0.1 mg/L	98%	85-115%	1.5%	0-20%	
	TCLP Nickel	0.103 mg/L		0.1 mg/L	103%	85-115%	1.1%	0-20%	
	TCLP Selenium	0.102 mg/L		0.1 mg/L	102%	85-115%	1.9%	0-20%	
	TCLP Silver	0.100 mg/L		0.1 mg/L	100%	85-115%	0.8%	0-20%	
MS	TCLP Antimony	0.572 mg/L	0.065 mg/L	0.5 mg/L	101%	80-120%			
	TCLP Arsenic	0.515 mg/L	ND	0.5 mg/L	103%	80-120%			
	TCLP Barium	0.656 mg/L	0.153 mg/L	0.5 mg/L	101%	80-120%			
	TCLP Berylium	0.516 mg/L	ND	0.5 mg/L	103%	80-120%			
	TCLP Cadmium	0.579 mg/L	0.073 mg/L	0.5 mg/L	101%	80-120%			
	TCLP Chromium	0.475 mg/L	ND	0.5 mg/L	95%	80-120%			
	TCLP Lead	0.479 mg/L	ND	0.5 mg/L	96%	80-120%			

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall Project**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_05545_L**								
	TCLP Nickel	0.534 mg/L	ND	0.5 mg/L	107%	80-120%			
	TCLP Selenium	0.538 mg/L	ND	0.5 mg/L	108%	80-120%			
	TCLP Silver	0.502 mg/L	ND	0.5 mg/L	101%	80-120%			
MSD	TCLP Antimony	0.568 mg/L	0.065 mg/L	0.5 mg/L	101%	80-120%	0.7%	0-20%	
	TCLP Arsenic	0.511 mg/L	ND	0.5 mg/L	102%	80-120%	0.7%	0-20%	
	TCLP Barium	0.653 mg/L	0.153 mg/L	0.5 mg/L	100%	80-120%	0.5%	0-20%	
	TCLP Berylium	0.502 mg/L	ND	0.5 mg/L	101%	80-120%	2.7%	0-20%	
	TCLP Cadmium	0.573 mg/L	0.073 mg/L	0.5 mg/L	100%	80-120%	1.1%	0-20%	
	TCLP Chromium	0.468 mg/L	ND	0.5 mg/L	94%	80-120%	1.4%	0-20%	
	TCLP Lead	0.474 mg/L	ND	0.5 mg/L	95%	80-120%	0.9%	0-20%	
	TCLP Nickel	0.536 mg/L	ND	0.5 mg/L	107%	80-120%	0.4%	0-20%	
	TCLP Selenium	0.517 mg/L	ND	0.5 mg/L	104%	80-120%	3.9%	0-20%	
	TCLP Silver	0.495 mg/L	ND	0.5 mg/L	99%	80-120%	1.4%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

Case Narrative

Project Name: **Retaining Wall Project**

ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5

This report is intended only for the use of W&M Environmental Group, Inc. and may contain information that is privileged and confidential. It may not be reproduced in full (or in part) without the expressed written permission of W&M Environmental Group, Inc. and Oxidor Laboratories, LLC.

Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

W&M Environmental Group, Inc.
Frank Clark

Sample Preservation Verification

Project Name: **Retaining Wall Project**

Receipt temp: **1.3 °C on Ice**
Receipt method: **Client**
Custody seal intact: **Not Present**

All applicable VOA's received free of headspace: **N/A**
All samples / labels received intact: **Yes**

Customer Sample ID: **SP-01**
Oxidor Sample ID: **12080639-001**
Collected: **08/30/12 08:30**

Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

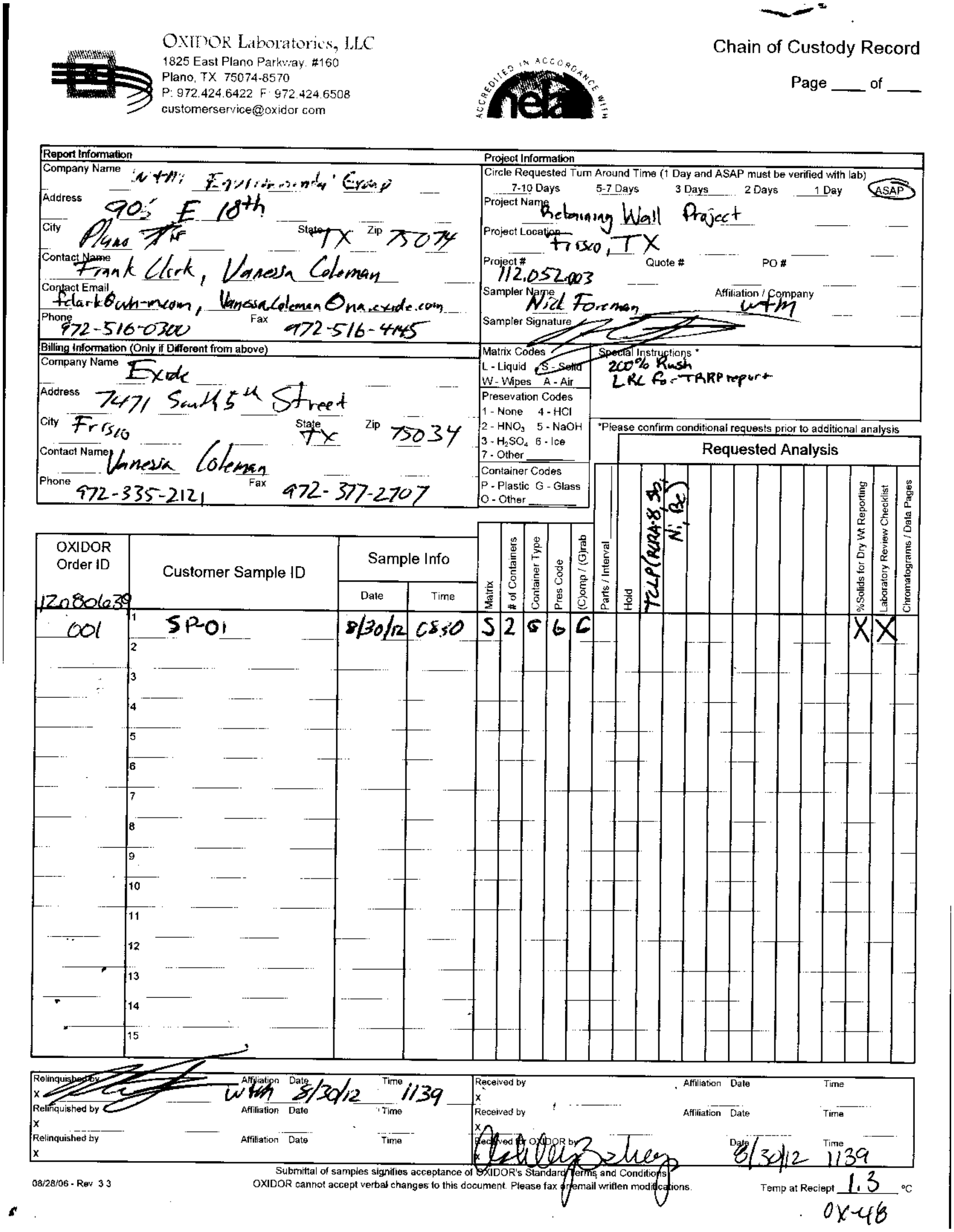
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	2	Composite		Temp	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

A.B.

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall Project**



OXIDOR Laboratories, LLC
1825 East Plano Parkway. #160
Plano, TX 75074-8570
P: 972.424.6422 F: 972.424.6508
customerservice@oxidor.com

Chain of Custody Record

Page ____ of ____

Report Information

Company Name WHM Environmental Group
Address 905 E 18th
City Plano ~~TX~~ State TX Zip 75074
Contact Name Frank Clerk, Vanessa Coleman
Contact Email fclark@wh-m.com, VanessaColeman@na.exide.com
Phone 972-516-0300 Fax 972-516-4445

Billing Information (Only if Different from above)

Company Name Exide
Address 7471 South 5th Street
City Frisco State TX Zip 75034
Contact Name Vanessa Coleman
Phone 972-335-2121 Fax 972-377-2707

Project Information

Circle Requested Turn Around Time (1 Day and ASAP must be verified with lab)
7-10 Days 5-7 Days 3 Days 2 Days 1 Day [✓ ASAP]
Project Name Retaining Wall Project
Project Location Frisco, TX
Project # 112.052.003 Quote # PO #
Sampler Name Nick Foreman Affiliation / Company WHM
Sampler Signature

Matrix Codes
L - Liquid [✓ S - Solid]
W - Wipes A - Air

Presevation Codes
1 - None 4 - HCl
2 - HNO_3 5 - NaOH
3 - H_2SO_4 6 - Ice
7 - Other ________

Container Codes
P - Plastic G - Glass
O - Other ________

Special Instructions *
200% Rush
LRC for TRRP report

*Please confirm conditional requests prior to additional analysis

Requested Analysis

OXIDOR Order ID		Customer Sample ID	Sample Info Date	Sample Info Time	Matrix	# of Containers	Container Type	Pres Code	(C)omp / (G)rab	Parts / Interval	Hold	TCLP(RCRA-8, Sb,	Ni, Be)								%Solids for Dry Wt Reporting	Laboratory Review Checklist	Chromatograms / Data Pages
12080639																							
001	1	SP-01	8/30/12	0830	S	2	G	6	C												X	X	
	2																						
	3																						
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
	10																						
	11																						
	12																						
	13																						
	14																						
	15																						

Relinquished by x Affiliation WHM Date 8/30/12 Time 1139
Relinquished by x Affiliation Date Time
Relinquished by x Affiliation Date Time

Received by x Affiliation Date Time
Received by x Affiliation Date Time
Received for OXIDOR by x Date 8/30/12 Time 1139

08/28/06 - Rev 3.3

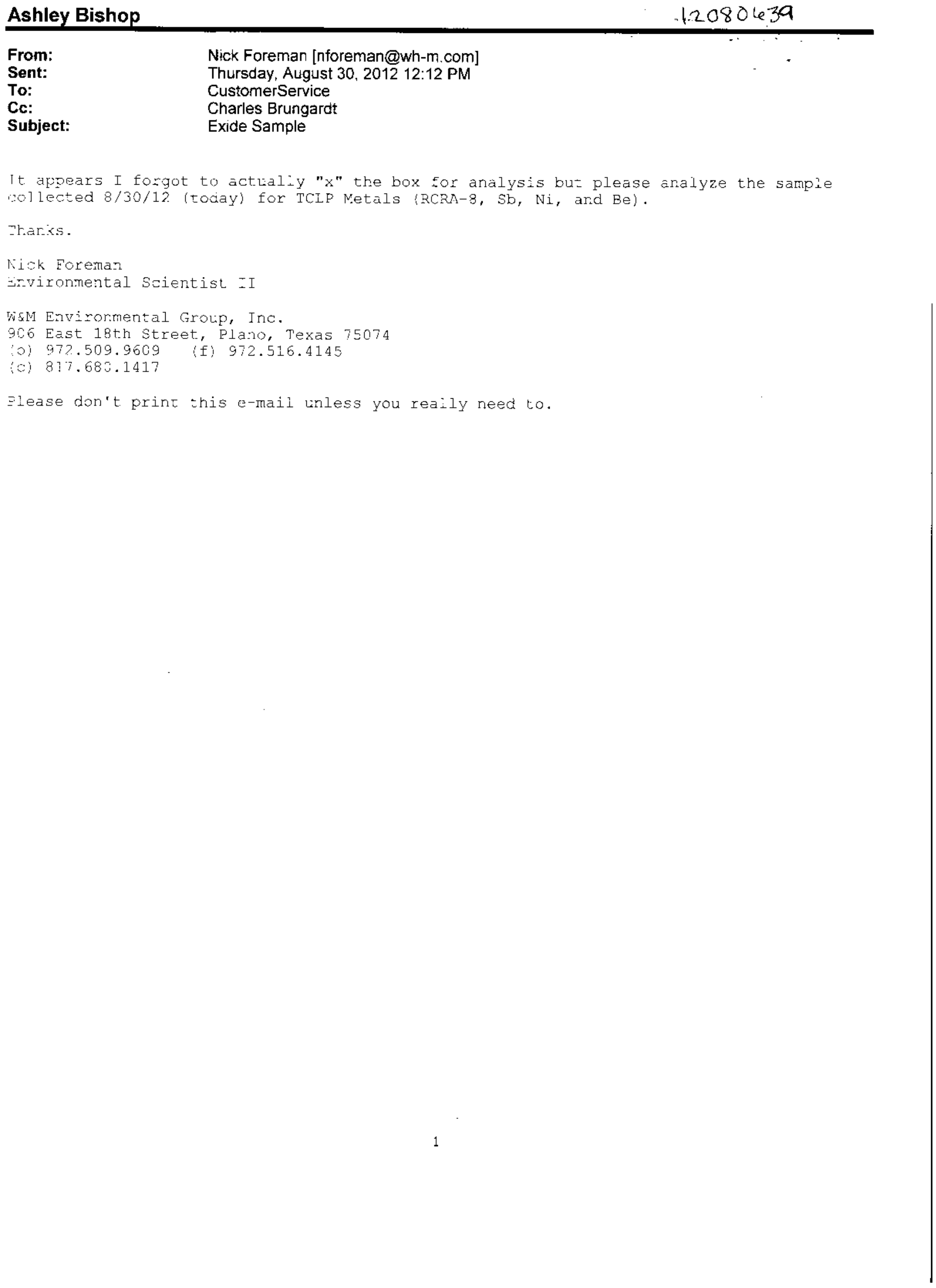
Submittal of samples signifies acceptance of OXIDOR's Standard Terms and Conditions
OXIDOR cannot accept verbal changes to this document. Please fax or email written modifications.

Temp at Reciept 1.3 °C

OX-48

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall Project**



Ashley Bishop 12080639

From: Nick Foreman [nforeman@wh-m.com]
Sent: Thursday, August 30, 2012 12:12 PM
To: CustomerService
Cc: Charles Brungardt
Subject: Exide Sample

It appears I forgot to actually "x" the box for analysis but please analyze the sample collected 8/30/12 (today) for TCLP Metals (RCRA-8, Sb, Ni, and Be).

Thanks.

Nick Foreman
Environmental Scientist II

W&M Environmental Group, Inc.
906 East 18th Street, Plano, Texas 75074
(o) 972.509.9609 (f) 972.516.4145
(c) 817.680.1417

Please don't print this e-mail unless you really need to.

OXIDOR Laboratories, LLC

OXIDOR Laboratory Review Checklist Cover Page

Project Name: 112.052.003 Retaining Wall
7174 South Fifth Street, Frisco, TX
OXIDOR Job Number: 12090435 W&M Environmental Group, Inc.

This data package consists of:

- ☒ This signature page, the laboratory review checklist, and the following reportable data:
  - ☒ **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 TNI Standard Module 2, Section 5.10
    - 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) for each analyte for each method and matrix;
  - ☒ **R10** Other problems or anomalies.
- ☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Charles Brungardt		President	September 24, 2012
Name	Signature	Official Title	Date

Laboratory Review Checklist: Reportable Data

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: September 24, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12090435 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		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	**Sample Quality Control (QC) and identification**					
		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	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MDL, 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 quantitation 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				
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the required 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	**Laboratory Control Samples (LCS)**					
		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				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data**					
		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	**Analytical duplicate data**					
		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	**Method Quantitation Limits (MQLs)**					
		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 included in the laboratory data package?	X				
		Does the detectability check sample (DCS) data document the laboratory's capability to detect the COCs at the MQL used to calculate the SQLs?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?		X			**ER#1**
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for all analytes, matrices, and methods associated with this LRC?	X				
		Was applicable and available technology used to lower the SQL to minimize any matrix interference effects on the sample results?	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 "No" or "NR" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: September 24, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12090435 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		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	**Initial / continuing calibration verification (ICV / CCV) and continuing calibration blanks (CCB)**					
		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	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (TNI Standard Module 2, Section 5.10)**					
		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	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results - Metals**					
		Were percent recoveries within the method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions - Metals**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) studies**					
		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	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analysis NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Capability (DOC)**					
		Was DOC conducted consistent with TNI Standard Module 4, Section 1.6?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (TNI Standard Module 4, Section 1.5)**					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		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 "No" or "NR" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: September 24, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12090435 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

ER#[1]	**DESCRIPTION**
ER#1	For pH, samples should be analyzed as soon as possible and preferably at the time of collection for Oxidor Sample ID's 12090435-001 and -002.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "No" or "NR" is checked on the LRC)

OXIDOR Laboratories, LLC

ACCREDITED IN ACCORDANCE WITH nelac
T104704227-12-7

Monday, September 24, 2012

W&M Environmental Group, Inc.
Frank Clark
906 E. 18th, Suite 100
Plano, TX 75074
Tel: (972) 516-0300 Fax: (972) 516-4145

Re: Project Name: Retaining Wall
Project Number: 112.052.003
Project Location: 7174 South Fifth Street, Frisco, TX

Oxidor received 2 solid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
12090435-001	SP-02	Solid	9/21/2012 10:45	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons
12090435-002	SP-03	Solid	9/21/2012 10:52	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons

Respectfully submitted,

Charles Brungardt
President

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-02**
Oxidor Sample ID: 12090435-001
Sample Received: 9/21/2012
Matrix: **Solid**
Sample Collected: **9/21/2012 10:45**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**76.0**	%	09/24/12 09:00	Dry Weight	L.J.	
pH	0.1	0.1	**7.6**	pH Units	09/21/12 16:21	9045	E.R.	S-12
Metals								
Digested by method 3005A on 09/24/12 at 09:50								
TCLP Antimony	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Barium	0.05	0.050	**0.113**	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.011**	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Lead	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	09/24/12 13:51	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	09/24/12 13:51	6020	K.O.	
Digested by method 7470A on 09/24/12 at 09:30								
TCLP Mercury	0.001	0.001	ND	mg/L	09/24/12 15:01	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 09/21/12 at 11:00								
TPH (C 6 to C12)	25	32.9	ND	mg/Kg	09/21/12 22:14	TX 1005	K.J.	
TPH (C12 to C28)	25	32.9	ND	mg/Kg	09/21/12 22:14	TX 1005	K.J.	
TPH (C28 to C35)	25	32.9	ND	mg/Kg	09/21/12 22:14	TX 1005	K.J.	
TPH (C6 to C35)	25	32.9	ND	mg/Kg	09/21/12 22:14	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	100	mg/Kg	100 mg/Kg	100%	70-130%
o-Terphenyl	107	mg/Kg	100 mg/Kg	107%	70-130%

Sample Prep

TCLP Metals Extraction

	Date Analyzed	Method	Analyst
TCLP Extraction	09/23/12 15:30	1311	T.C.

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-03**
Oxidor Sample ID: 12090435-002
Sample Received: 9/21/2012

Matrix: **Solid**
Sample Collected: **9/21/2012 10:52**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**81.0**	%	09/24/12 09:00	Dry Weight	L.J.	
pH	0.1	0.1	**7.7**	pH Units	09/21/12 16:21	9045	E.R.	S-12
Metals								
Digested by method 3005A on 09/24/12 at 09:50								
TCLP Antimony	0.05	0.050	**0.131**	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Barium	0.05	0.050	**0.086**	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.014**	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Lead	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	09/24/12 13:57	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	09/24/12 13:57	6020	K.O.	
Digested by method 7470A on 09/24/12 at 09:30								
TCLP Mercury	0.001	0.001	ND	mg/L	09/24/12 15:02	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 09/21/12 at 11:00								
TPH (C 6 to C12)	25	30.9	ND	mg/Kg	09/21/12 23:02	TX 1005	K.J.	
TPH (C12 to C28)	25	30.9	ND	mg/Kg	09/21/12 23:02	TX 1005	K.J.	
TPH (C28 to C35)	25	30.9	ND	mg/Kg	09/21/12 23:02	TX 1005	K.J.	
TPH (C6 to C35)	25	30.9	ND	mg/Kg	09/21/12 23:02	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	100	mg/Kg	100 mg/Kg	100%	70-130%
o-Terphenyl	109	mg/Kg	100 mg/Kg	109%	70-130%

Sample Prep

TCLP Metals Extraction

TCLP Extraction	09/23/12 15:30	1311	T.C.

W&M Environmental Group, Inc.
Frank Clark

Sample Cross Reference

Project Name: **Retaining Wall**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
SP-02	12090435-001	Total Petroleum Hydrocarbons	TX 1005	1005_03629AS
		Dry Weight	Dry Weight	DW___05226_S
		TCLP Mercury	7470A	MERC_08123_L
		TCLP Antimony	6020	META_09445_L
		TCLP Arsenic	6020	META_09445_L
		TCLP Barium	6020	META_09445_L
		TCLP Berylium	6020	META_09445_L
		TCLP Cadmium	6020	META_09445_L
		TCLP Chromium	6020	META_09445_L
		TCLP Lead	6020	META_09445_L
		TCLP Nickel	6020	META_09445_L
		TCLP Selenium	6020	META_09445_L
		TCLP Silver	6020	META_09445_L
		pH	9045	PH___03115_S
SP-03	12090435-002	Total Petroleum Hydrocarbons	TX 1005	1005_03629AS
		Dry Weight	Dry Weight	DW___05226_S
		TCLP Mercury	7470A	MERC_08123_L
		TCLP Antimony	6020	META_09445_L
		TCLP Arsenic	6020	META_09445_L
		TCLP Barium	6020	META_09445_L
		TCLP Berylium	6020	META_09445_L
		TCLP Cadmium	6020	META_09445_L
		TCLP Chromium	6020	META_09445_L
		TCLP Lead	6020	META_09445_L
		TCLP Nickel	6020	META_09445_L
		TCLP Selenium	6020	META_09445_L
		TCLP Silver	6020	META_09445_L
		pH	9045	PH___03115_S

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**DW___05226_S**								
Replicate	% Solids	78.2 %	76.0 %				2.9%	0-20%	
QCBatchID	**PH___03115_S**								
LCS	pH	7.0 pH Units		7 pH Units	100%	99-102%			
LCSD	pH	7.0 pH Units		7 pH Units	101%	99-102%	0.6%	0-25%	
Replicate	pH	7.3 pH Units	7.0 pH Units				4.2%	0-10%	
QCBatchID	**MERC_08123_L**								
Blank	TCLP Mercury	ND mg/L							
LCS	TCLP Mercury	0.005 mg/L		0.005 mg/L	96%	85-115%			
LCSD	TCLP Mercury	0.005 mg/L		0.005 mg/L	101%	85-115%	1.4%	0-25%	
MS	TCLP Mercury	0.021 mg/L	ND	0.02 mg/L	103%	80-120%			
MSD	TCLP Mercury	0.019 mg/L	ND	0.02 mg/L	96%	80-120%	9.5%	0-25%	
QCBatchID	**META_09445_L**								
Blank	TCLP Antimony	ND mg/L							
	TCLP Arsenic	ND mg/L							
	TCLP Barium	ND mg/L							
	TCLP Berylium	ND mg/L							
	TCLP Cadmium	ND mg/L							
	TCLP Chromium	ND mg/L							
	TCLP Lead	ND mg/L							
	TCLP Nickel	ND mg/L							
	TCLP Selenium	ND mg/L							
	TCLP Silver	ND mg/L							
LCS	TCLP Antimony	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Arsenic	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Barium	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Berylium	0.097 mg/L		0.1 mg/L	97%	85-115%			
	TCLP Cadmium	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Chromium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	TCLP Lead	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Nickel	0.103 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Selenium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	TCLP Silver	0.102 mg/L		0.1 mg/L	102%	85-115%			
LCSD	TCLP Antimony	0.101 mg/L		0.1 mg/L	101%	85-115%	0.2%	0-20%	
	TCLP Arsenic	0.103 mg/L		0.1 mg/L	103%	85-115%	0.4%	0-20%	
	TCLP Barium	0.102 mg/L		0.1 mg/L	102%	85-115%	0.8%	0-20%	
	TCLP Berylium	0.099 mg/L		0.1 mg/L	99%	85-115%	2.1%	0-20%	
	TCLP Cadmium	0.101 mg/L		0.1 mg/L	101%	85-115%	0.2%	0-20%	
	TCLP Chromium	0.102 mg/L		0.1 mg/L	103%	85-115%	0.5%	0-20%	
	TCLP Lead	0.100 mg/L		0.1 mg/L	100%	85-115%	0.1%	0-20%	
	TCLP Nickel	0.104 mg/L		0.1 mg/L	104%	85-115%	0.6%	0-20%	
	TCLP Selenium	0.102 mg/L		0.1 mg/L	102%	85-115%	0.2%	0-20%	
	TCLP Silver	0.102 mg/L		0.1 mg/L	102%	85-115%	0.0%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_09445_L**								
MS	TCLP Antimony	0.507 mg/L	ND	0.5 mg/L	101%	80-120%			
	TCLP Arsenic	0.516 mg/L	ND	0.5 mg/L	103%	80-120%			
	TCLP Barium	0.561 mg/L	0.049 mg/L	0.5 mg/L	102%	80-120%			
	TCLP Berylium	0.506 mg/L	ND	0.5 mg/L	101%	80-120%			
	TCLP Cadmium	0.496 mg/L	ND	0.5 mg/L	99%	80-120%			
	TCLP Chromium	0.509 mg/L	ND	0.5 mg/L	102%	80-120%			
	TCLP Lead	0.495 mg/L	ND	0.5 mg/L	99%	80-120%			
	TCLP Nickel	0.580 mg/L	0.052 mg/L	0.5 mg/L	106%	80-120%			
	TCLP Selenium	0.528 mg/L	ND	0.5 mg/L	106%	80-120%			
	TCLP Silver	0.508 mg/L	ND	0.5 mg/L	102%	80-120%			
MSD	TCLP Antimony	0.501 mg/L	ND	0.5 mg/L	100%	80-120%	1.2%	0-20%	
	TCLP Arsenic	0.498 mg/L	ND	0.5 mg/L	100%	80-120%	3.6%	0-20%	
	TCLP Barium	0.545 mg/L	0.049 mg/L	0.5 mg/L	99%	80-120%	2.8%	0-20%	
	TCLP Berylium	0.504 mg/L	ND	0.5 mg/L	101%	80-120%	0.3%	0-20%	
	TCLP Cadmium	0.504 mg/L	ND	0.5 mg/L	101%	80-120%	1.6%	0-20%	
	TCLP Chromium	0.499 mg/L	ND	0.5 mg/L	100%	80-120%	2.1%	0-20%	
	TCLP Lead	0.490 mg/L	ND	0.5 mg/L	98%	80-120%	1.0%	0-20%	
	TCLP Nickel	0.570 mg/L	0.052 mg/L	0.5 mg/L	104%	80-120%	1.7%	0-20%	
	TCLP Selenium	0.512 mg/L	ND	0.5 mg/L	102%	80-120%	3.1%	0-20%	
	TCLP Silver	0.508 mg/L	ND	0.5 mg/L	102%	80-120%	0.1%	0-20%	
QCBatchID	**1005_03629AS**								
Blank	TPH (C 6 to C12)	ND mg/Kg							
	TPH (C12 to C28)	ND mg/Kg							
	TPH (C28 to C35)	ND mg/Kg							
	TPH (C6 to C35)	ND mg/Kg							
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	111 mg/Kg		100 mg/Kg	111%	70-130%			
	o-Terphenyl	121 mg/Kg		100 mg/Kg	121%	70-130%			
LCS	TPH (C6 to C35)	110 mg/Kg		100 mg/Kg	110%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	96.9 mg/Kg		100 mg/Kg	97%	70-130%			
	o-Terphenyl	105 mg/Kg		100 mg/Kg	105%	70-130%			
LCSD	TPH (C6 to C35)	117 mg/Kg		100 mg/Kg	117%	75-125%	6.2%	0-20%	
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	102 mg/Kg		100 mg/Kg	102%	70-130%			
	o-Terphenyl	112 mg/Kg		100 mg/Kg	112%	70-130%			
MS	TPH (C6 to C35)	116 mg/Kg	ND	100 mg/Kg	116%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	107 mg/Kg		100 mg/Kg	107%	70-130%			
	o-Terphenyl	116 mg/Kg		100 mg/Kg	116%	70-130%			
MSD	TPH (C6 to C35)	120 mg/Kg	ND	100 mg/Kg	120%	75-125%	3.4%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags

QCBatchID 1005_03629AS

Surrogate		Result	Spike Conc	Recovery	Rec Limits
	1-chlorooctane	109 mg/Kg	100 mg/Kg	109%	70-130%
	o-Terphenyl	117 mg/Kg	100 mg/Kg	117%	70-130%

W&M Environmental Group, Inc.
Frank Clark

Case Narrative

Project Name: **Retaining Wall**

S-12	Sample should be analyzed as soon as possible and preferably at the time of collection.
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5

This report is intended only for the use of W&M Environmental Group, Inc. and may contain information that is privileged and confidential. It may not be reproduced in full (or in part) without the expressed written permission of W&M Environmental Group, Inc. and Oxidor Laboratories, LLC.

Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

W&M Environmental Group, Inc.
Frank Clark

Sample Preservation Verification

Project Name: **Retaining Wall**

Receipt temp: **1.3 °C on Ice**
Receipt method: **Client**
Custody seal intact: **Not Present**
All samples / labels received intact: **Yes**

Customer Sample ID: **SP-02**
Oxidor Sample ID: **12090435-001**
Collected: **09/21/12 10:45**
Collected By: **Brent Vollmar**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Customer Sample ID: **SP-03**
Oxidor Sample ID: **12090435-002**
Collected: **09/21/12 10:52**
Collected By: **Brent Vollmar**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

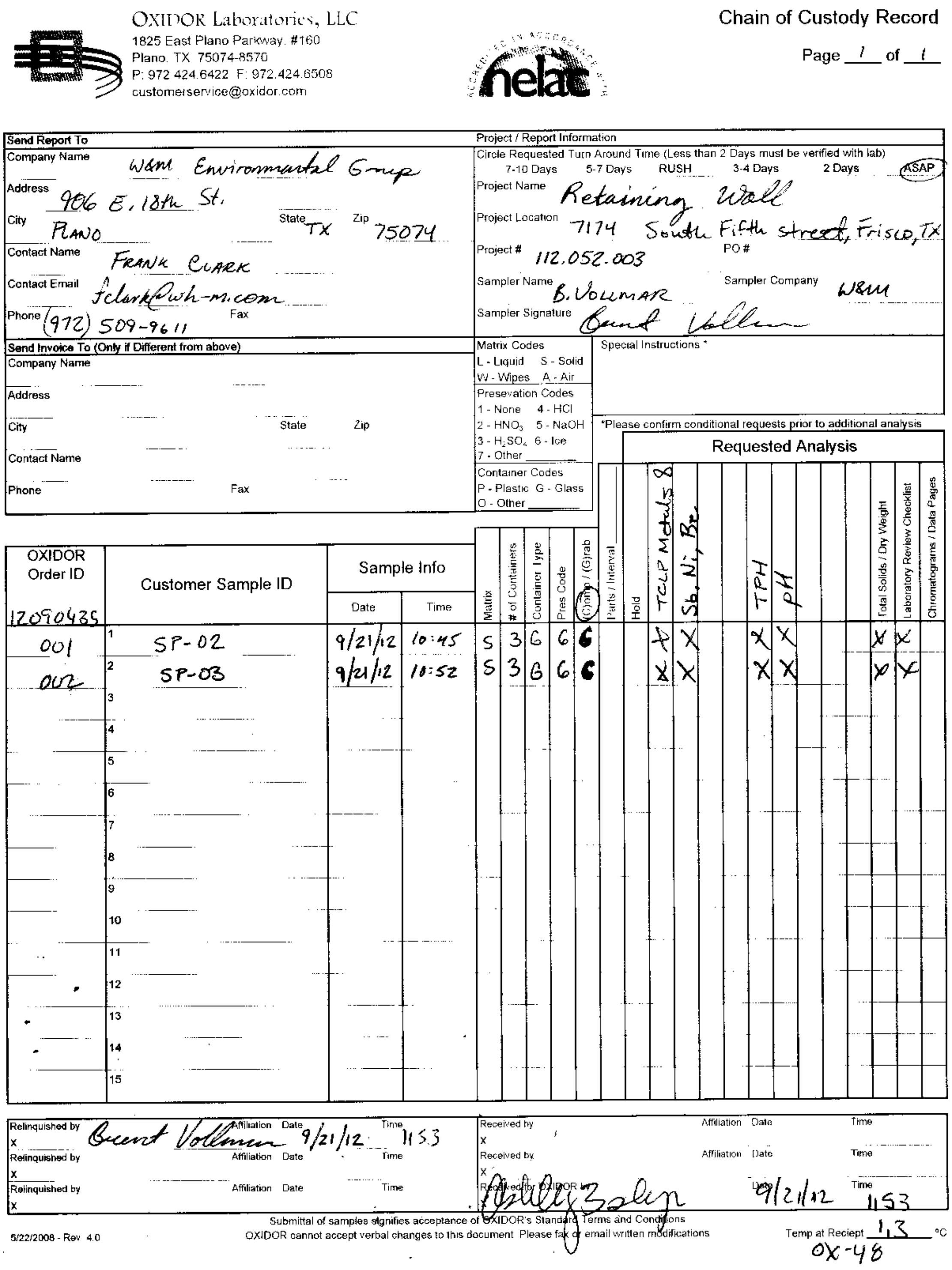
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

A.B.

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



OXIDOR Laboratories, LLC
1825 East Plano Parkway. #160
Plano. TX 75074-8570
P: 972 424.6422 F: 972.424.6508
customerservice@oxidor.com

Chain of Custody Record

Page 1 of 1

Send Report To

Company Name W&M Environmental Group
Address 906 E. 18th St.
City PLANO State TX Zip 75074
Contact Name FRANK CLARK
Contact Email fclark@wh-m.com
Phone (972) 509-9611 Fax

Project / Report Information

Circle Requested Turn Around Time (Less than 2 Days must be verified with lab)
7-10 Days 5-7 Days RUSH 3-4 Days 2 Days [✓ ASAP]
Project Name Retaining Wall
Project Location 7174 South Fifth street, Frisco, TX
Project # 112.052.003 PO #
Sampler Name B. VOLLMAR Sampler Company W&M
Sampler Signature Brent Vollmar

Send Invoice To (Only if Different from above)

Company Name
Address
City State Zip
Contact Name
Phone Fax

Matrix Codes
L - Liquid S - Solid
W - Wipes A - Air

Presevation Codes
1 - None 4 - HCl
2 - HNO_3 5 - NaOH
3 - H_2SO_4 6 - Ice
7 - Other

Container Codes
P - Plastic G - Glass
O - Other

Special Instructions *

*Please confirm conditional requests prior to additional analysis

OXIDOR Order ID 12090435		Customer Sample ID	Sample Info									Requested Analysis											
			Date	Time	Matrix	# of Containers	Container Type	Pres Code	[✓ (C)omp] / (G)rab	Parts / Interval	Hold	TCLP Metals 8	Sb, Ni, Be			TPH	pH				Total Solids / Dry Weight	Laboratory Review Checklist	Chromatograms / Data Pages
001	1	SP-02	9/21/12	10:45	S	3	G	6	C			X	X			X	X				X	X	
002	2	SP-03	9/21/12	10:52	S	3	G	6	C			X	X			X	X				X	X	
	3																						
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
	10																						
	11																						
	12																						
	13																						
	14																						
	15																						

Relinquished by x Brent Vollmar	Affiliation	Date 9/21/12	Time 1153	Received by x	Affiliation	Date	Time
Relinquished by x	Affiliation	Date	Time	Received by x	Affiliation	Date	Time
Relinquished by x	Affiliation	Date	Time	Received for OXIDOR by x		Date 9/21/12	Time 1153

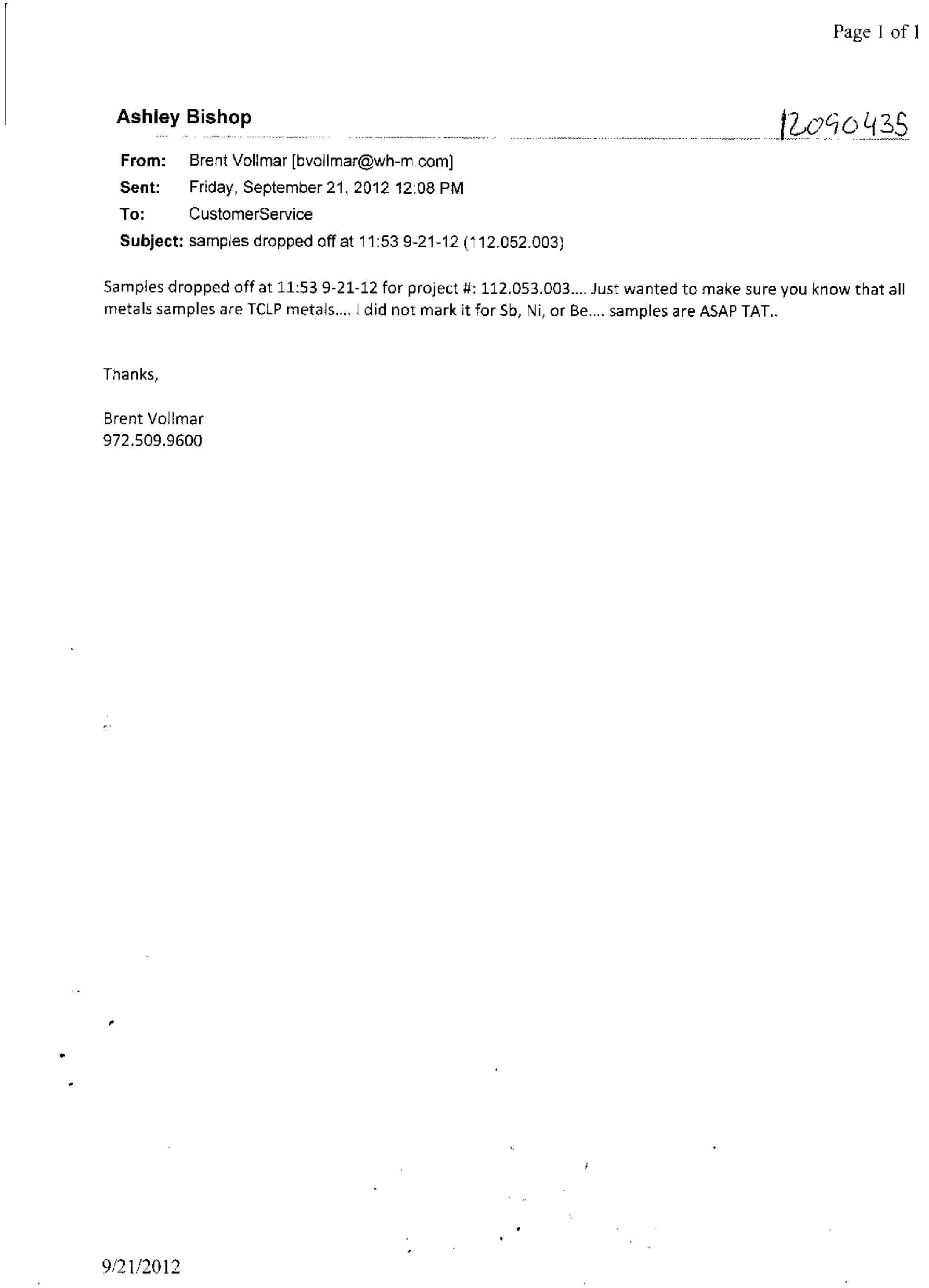
Submittal of samples signifies acceptance of OXIDOR's Standard Terms and Conditions
OXIDOR cannot accept verbal changes to this document Please fax or email written modifications

5/22/2008 - Rev 4.0

Temp at Reciept 1.3 °C
OX-48

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



Page 1 of 1

Ashley Bishop

12090435

From: Brent Vollmar [bvollmar@wh-m.com]
Sent: Friday, September 21, 2012 12:08 PM
To: CustomerService
Subject: samples dropped off at 11:53 9-21-12 (112.052.003)

Samples dropped off at 11:53 9-21-12 for project #: 112.053.003.... Just wanted to make sure you know that all metals samples are TCLP metals.... I did not mark it for Sb, Ni, or Be.... samples are ASAP TAT..

Thanks,

Brent Vollmar
972.509.9600

9/21/2012

OXIDOR Laboratories, LLC

T104704227-12-7

Wednesday, October 24, 2012

W&M Environmental Group, Inc.
Frank Clark
906 E. 18th, Suite 100
Plano, TX 75074
Tel: (972) 516-0300 Fax: (972) 516-4145

Re: Project Name: Retaining Wall
Project Number: 112.052.003
Project Location: 7471 South Fifth Street, Frisco, TX

Oxidor received 3 solid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
12100625-001	SP-04	Solid	10/22/2012 12:20	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons
12100625-002	SP-05	Solid	10/22/2012 12:25	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons
12100625-003	SP-06	Solid	10/22/2012 12:30	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons

Respectfully submitted,

Charles Brungardt
President

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-04**
Oxidor Sample ID: 12100625-001   Matrix: **Solid**
Sample Received: 10/22/2012   Sample Collected: **10/22/2012 12:20**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**84.0**	%	10/22/12 20:00	Dry Weight	M.B.	
pH	0.1	0.1	**8.2**	pH Units	10/22/12 21:00	9045	M.B.	S-12
Metals								
Digested by method 3005A on 10/23/12 at 10:55								
TCLP Antimony	0.05	0.050	**0.116**	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Barium	0.05	0.050	**0.137**	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.267**	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Lead	0.05	0.487	**12.5**	mg/L	10/23/12 15:21	6020	K.O.	D-1
TCLP Nickel	0.05	0.050	ND	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	10/23/12 15:15	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	10/23/12 15:15	6020	K.O.	
Digested by method 7470A on 10/23/12 at 10:15								
TCLP Mercury	0.001	0.001	ND	mg/L	10/23/12 17:11	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 10/22/12 at 11:00								
TPH (C 6 to C12)	25	29.8	ND	mg/Kg	10/23/12 01:04	TX 1005	K.J.	
TPH (C12 to C28)	25	29.8	ND	mg/Kg	10/23/12 01:04	TX 1005	K.J.	
TPH (C28 to C35)	25	29.8	ND	mg/Kg	10/23/12 01:04	TX 1005	K.J.	
TPH (C6 to C35)	25	29.8	ND	mg/Kg	10/23/12 01:04	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	115	mg/Kg	100 mg/Kg	115%	70-130%
o-Terphenyl	107	mg/Kg	100 mg/Kg	107%	70-130%

Sample Prep

TCLP Metals Extraction

Parameter	Date Analyzed	Method	Analyst
TCLP Extraction	10/22/12 17:40	1311	K.O.

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-05**
Oxidor Sample ID: 12100625-002
Sample Received: 10/22/2012
Matrix: **Solid**
Sample Collected: **10/22/2012 12:25**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**88.2**	%	10/22/12 20:00	Dry Weight	M.B.	
pH	0.1	0.1	**8.2**	pH Units	10/22/12 21:00	9045	M.B.	S-12
Metals								
Digested by method 3005A on 10/23/12 at 10:55								
TCLP Antimony	0.05	0.050	**0.082**	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Barium	0.05	0.050	**0.072**	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.039**	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Lead	0.05	0.050	**0.079**	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	10/23/12 15:27	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	10/23/12 15:27	6020	K.O.	
Digested by method 7470A on 10/23/12 at 10:15								
TCLP Mercury	0.001	0.001	ND	mg/L	10/23/12 17:11	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 10/22/12 at 11:00								
TPH (C 6 to C12)	25	28.3	ND	mg/Kg	10/23/12 02:48	TX 1005	K.J.	
TPH (C12 to C28)	**25**	**28.3**	**110**	**mg/Kg**	10/23/12 02:48	TX 1005	K.J.	
TPH (C28 to C35)	**25**	**28.3**	**33.8**	**mg/Kg**	10/23/12 02:48	TX 1005	K.J.	
TPH (C6 to C35)	**25**	**28.3**	**143.8**	**mg/Kg**	10/23/12 02:48	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	119	mg/Kg	100 mg/Kg	119%	70-130%
o-Terphenyl	121	mg/Kg	100 mg/Kg	121%	70-130%

Sample Prep

TCLP Metals Extraction

Parameter	Date Analyzed	Method	Analyst
TCLP Extraction	10/22/12 17:40	1311	K.O.

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-06**
Oxidor Sample ID: 12100625-003
Sample Received: 10/22/2012

Matrix: **Solid**
Sample Collected: **10/22/2012 12:30**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**81.7**	%	10/22/12 20:00	Dry Weight	M.B.	
pH	0.1	0.1	**8.3**	pH Units	10/22/12 21:00	9045	M.B.	S-12
Metals								
Digested by method 3005A on 10/23/12 at 10:55								
TCLP Antimony	0.05	0.050	**0.083**	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Barium	0.05	0.050	**0.083**	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.052**	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Lead	0.05	0.050	**0.287**	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	10/23/12 15:46	6020	K.O.	
TCLP Silver	0.01	0.010	ND	mg/L	10/23/12 15:46	6020	K.O.	
Digested by method 7470A on 10/23/12 at 10:15								
TCLP Mercury	0.001	0.001	ND	mg/L	10/23/12 17:12	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 10/22/12 at 11:00								
TPH (C 6 to C12)	25	30.6	ND	mg/Kg	10/23/12 01:57	TX 1005	K.J.	
TPH (C12 to C28)	25	30.6	ND	mg/Kg	10/23/12 01:57	TX 1005	K.J.	
TPH (C28 to C35)	25	30.6	ND	mg/Kg	10/23/12 01:57	TX 1005	K.J.	
TPH (C6 to C35)	25	30.6	ND	mg/Kg	10/23/12 01:57	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	116	mg/Kg	100 mg/Kg	116%	70-130%
o-Terphenyl	106	mg/Kg	100 mg/Kg	106%	70-130%

Sample Prep

TCLP Metals Extraction

	Date Analyzed	Method	Analyst
TCLP Extraction	10/22/12 17:40	1311	K.O.

W&M Environmental Group, Inc.
Frank Clark

Sample Cross Reference

Project Name: **Retaining Wall**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
SP-04	12100625-001	Total Petroleum Hydrocarbons	TX 1005	1005_05129BS
		Dry Weight	Dry Weight	DW___08326_S
		TCLP Mercury	7470A	MERC_10723_L
		TCLP Silver	6020	META_01046_L
		TCLP Nickel	6020	META_01046_L
		TCLP Lead	6020	META_01046_L
		TCLP Chromium	6020	META_01046_L
		TCLP Cadmium	6020	META_01046_L
		TCLP Berylium	6020	META_01046_L
		TCLP Barium	6020	META_01046_L
		TCLP Arsenic	6020	META_01046_L
		TCLP Antimony	6020	META_01046_L
		TCLP Selenium	6020	META_01046_L
		pH	9045	PH___07315_S
SP-05	12100625-002	Total Petroleum Hydrocarbons	TX 1005	1005_05129BS
		Dry Weight	Dry Weight	DW___08326_S
		TCLP Mercury	7470A	MERC_10723_L
		TCLP Chromium	6020	META_01046_L
		TCLP Antimony	6020	META_01046_L
		TCLP Arsenic	6020	META_01046_L
		TCLP Barium	6020	META_01046_L
		TCLP Lead	6020	META_01046_L
		TCLP Nickel	6020	META_01046_L
		TCLP Selenium	6020	META_01046_L
		TCLP Silver	6020	META_01046_L
		TCLP Cadmium	6020	META_01046_L
		TCLP Berylium	6020	META_01046_L
		pH	9045	PH___07315_S
SP-06	12100625-003	Total Petroleum Hydrocarbons	TX 1005	1005_05129BS
		Dry Weight	Dry Weight	DW___08326_S
		TCLP Mercury	7470A	MERC_10723_L
		TCLP Antimony	6020	META_01046_L
		TCLP Silver	6020	META_01046_L
		TCLP Selenium	6020	META_01046_L
		TCLP Nickel	6020	META_01046_L
		TCLP Lead	6020	META_01046_L
		TCLP Chromium	6020	META_01046_L
		TCLP Cadmium	6020	META_01046_L
		TCLP Berylium	6020	META_01046_L
		TCLP Arsenic	6020	META_01046_L
		TCLP Barium	6020	META_01046_L
		pH	9045	PH___07315_S

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**DW___08326_S**								
Replicate	% Solids	84.8 %	84.0 %				0.9%	0-20%	
QCBatchID	**PH___07315_S**								
LCS	pH	7.0 pH Units		7 pH Units	100%	99-102%			
LCSD	pH	7.0 pH Units		7 pH Units	100%	99-102%	0.3%	0-25%	
Replicate	pH	8.2 pH Units	8.2 pH Units				0.1%	0-10%	
QCBatchID	**MERC_10723_L**								
Blank	TCLP Mercury	ND mg/L							
LCS	TCLP Mercury	0.005 mg/L		0.005 mg/L	98%	85-115%			
LCSD	TCLP Mercury	0.005 mg/L		0.005 mg/L	105%	85-115%	4.6%	0-25%	
MS	TCLP Mercury	0.021 mg/L	ND	0.02 mg/L	103%	80-120%			
MSD	TCLP Mercury	0.022 mg/L	ND	0.02 mg/L	109%	80-120%	4.1%	0-25%	
QCBatchID	**META_01046_L**								
Blank	TCLP Antimony	ND mg/L							
	TCLP Arsenic	ND mg/L							
	TCLP Barium	ND mg/L							
	TCLP Berylium	ND mg/L							
	TCLP Cadmium	ND mg/L							
	TCLP Chromium	ND mg/L							
	TCLP Lead	ND mg/L							
	TCLP Nickel	ND mg/L							
	TCLP Selenium	ND mg/L							
	TCLP Silver	ND mg/L							
LCS	TCLP Antimony	0.098 mg/L		0.1 mg/L	98%	85-115%			
	TCLP Arsenic	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Barium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Berylium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Cadmium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Chromium	0.099 mg/L		0.1 mg/L	99%	85-115%			
	TCLP Lead	0.096 mg/L		0.1 mg/L	96%	85-115%			
	TCLP Nickel	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Selenium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Silver	0.099 mg/L		0.1 mg/L	99%	85-115%			
LCSD	TCLP Antimony	0.100 mg/L		0.1 mg/L	100%	85-115%	2.1%	0-20%	
	TCLP Arsenic	0.102 mg/L		0.1 mg/L	102%	85-115%	1.3%	0-20%	
	TCLP Barium	0.102 mg/L		0.1 mg/L	102%	85-115%	2.1%	0-20%	
	TCLP Berylium	0.098 mg/L		0.1 mg/L	98%	85-115%	2.5%	0-20%	
	TCLP Cadmium	0.102 mg/L		0.1 mg/L	102%	85-115%	1.5%	0-20%	
	TCLP Chromium	0.100 mg/L		0.1 mg/L	100%	85-115%	0.8%	0-20%	
	TCLP Lead	0.099 mg/L		0.1 mg/L	99%	85-115%	2.6%	0-20%	
	TCLP Nickel	0.102 mg/L		0.1 mg/L	102%	85-115%	1.2%	0-20%	
	TCLP Selenium	0.101 mg/L		0.1 mg/L	101%	85-115%	1.2%	0-20%	
	TCLP Silver	0.101 mg/L		0.1 mg/L	101%	85-115%	2.1%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QCBatchID META_01046_L

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
MS	TCLP Antimony	0.622 mg/L	0.116 mg/L	0.5 mg/L	101%	80-120%			
	TCLP Arsenic	0.543 mg/L	ND	0.5 mg/L	109%	80-120%			
	TCLP Barium	0.652 mg/L	0.137 mg/L	0.5 mg/L	103%	80-120%			
	TCLP Berylium	0.497 mg/L	ND	0.5 mg/L	99%	80-120%			
	TCLP Cadmium	0.761 mg/L	0.267 mg/L	0.5 mg/L	99%	80-120%			
	TCLP Chromium	0.510 mg/L	ND	0.5 mg/L	102%	80-120%			
	TCLP Lead	13.1 mg/L	12.5 mg/L	0.5 mg/L	120%	80-120%			
	TCLP Nickel	0.564 mg/L	ND	0.5 mg/L	113%	80-120%			
	TCLP Selenium	0.501 mg/L	ND	0.5 mg/L	100%	80-120%			
	TCLP Silver	0.491 mg/L	ND	0.5 mg/L	98%	80-120%			
MSD	TCLP Antimony	0.615 mg/L	0.116 mg/L	0.5 mg/L	100%	80-120%	1.2%	0-20%	
	TCLP Arsenic	0.547 mg/L	ND	0.5 mg/L	109%	80-120%	0.7%	0-20%	
	TCLP Barium	0.652 mg/L	0.137 mg/L	0.5 mg/L	103%	80-120%	0.1%	0-20%	
	TCLP Berylium	0.494 mg/L	ND	0.5 mg/L	99%	80-120%	0.7%	0-20%	
	TCLP Cadmium	0.756 mg/L	0.267 mg/L	0.5 mg/L	98%	80-120%	0.6%	0-20%	
	TCLP Chromium	0.495 mg/L	ND	0.5 mg/L	99%	80-120%	2.9%	0-20%	
	TCLP Lead	13.1 mg/L	12.5 mg/L	0.5 mg/L	115%	80-120%	0.2%	0-20%	
	TCLP Nickel	0.546 mg/L	ND	0.5 mg/L	109%	80-120%	3.2%	0-20%	
	TCLP Selenium	0.509 mg/L	ND	0.5 mg/L	102%	80-120%	1.6%	0-20%	
	TCLP Silver	0.491 mg/L	ND	0.5 mg/L	98%	80-120%	0.0%	0-20%	

QCBatchID 1005_05129BS

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
Blank	TPH (C 6 to C12)	ND mg/Kg							
	TPH (C12 to C28)	ND mg/Kg							
	TPH (C28 to C35)	ND mg/Kg							
	TPH (C6 to C35)	ND mg/Kg							
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	123 mg/Kg		100 mg/Kg	123%	70-130%			
	o-Terphenyl	112 mg/Kg		100 mg/Kg	112%	70-130%			
LCS	TPH (C6 to C35)	115 mg/Kg		100 mg/Kg	115%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	120 mg/Kg		100 mg/Kg	120%	70-130%			
	o-Terphenyl	108 mg/Kg		100 mg/Kg	108%	70-130%			
LCSD	TPH (C6 to C35)	120 mg/Kg		100 mg/Kg	120%	75-125%	4.3%	0-20%	
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	122 mg/Kg		100 mg/Kg	122%	70-130%			
	o-Terphenyl	114 mg/Kg		100 mg/Kg	114%	70-130%			
MS	TPH (C6 to C35)	119 mg/Kg	ND	100 mg/Kg	119%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	121 mg/Kg		100 mg/Kg	121%	70-130%			
	o-Terphenyl	115 mg/Kg		100 mg/Kg	115%	70-130%			
MSD	TPH (C6 to C35)	121 mg/Kg	ND	100 mg/Kg	121%	75-125%	1.7%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**1005_05129BS**								

Surrogate	Result	Spike Conc	Recovery	Rec Limits
1-chlorooctane	122 mg/Kg	100 mg/Kg	122%	70-130%
o-Terphenyl	106 mg/Kg	100 mg/Kg	106%	70-130%

W&M Environmental Group, Inc.
Frank Clark

Case Narrative

Project Name: **Retaining Wall**

D-1	Elevated reporting limit(s) due to dilution. Dilution resulted from sample matrix interference, high target analyte(s), high non-target analyte(s) or a combination thereof.
S-12	Sample should be analyzed as soon as possible and preferably at the time of collection.
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5

This report is intended only for the use of W&M Environmental Group, Inc. and may contain information that is privileged and confidential. It may not be reproduced in full (or in part) without the expressed written permission of W&M Environmental Group, Inc. and Oxidor Laboratories, LLC.

Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

W&M Environmental Group, Inc.
Frank Clark

Sample Preservation Verification

Project Name: **Retaining Wall**

Receipt temp: **2.7 °C on Ice**
Receipt method: **Client**
Custody seal intact: **Not Present**
All samples / labels received intact: **Yes**

Customer Sample ID: **SP-04**
Oxidor Sample ID: **12100625-001**
Collected: **10/22/12 12:20**
Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Customer Sample ID: **SP-05**
Oxidor Sample ID: **12100625-002**
Collected: **10/22/12 12:25**
Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Customer Sample ID: **SP-06**
Oxidor Sample ID: **12100625-003**
Collected: **10/22/12 12:30**
Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

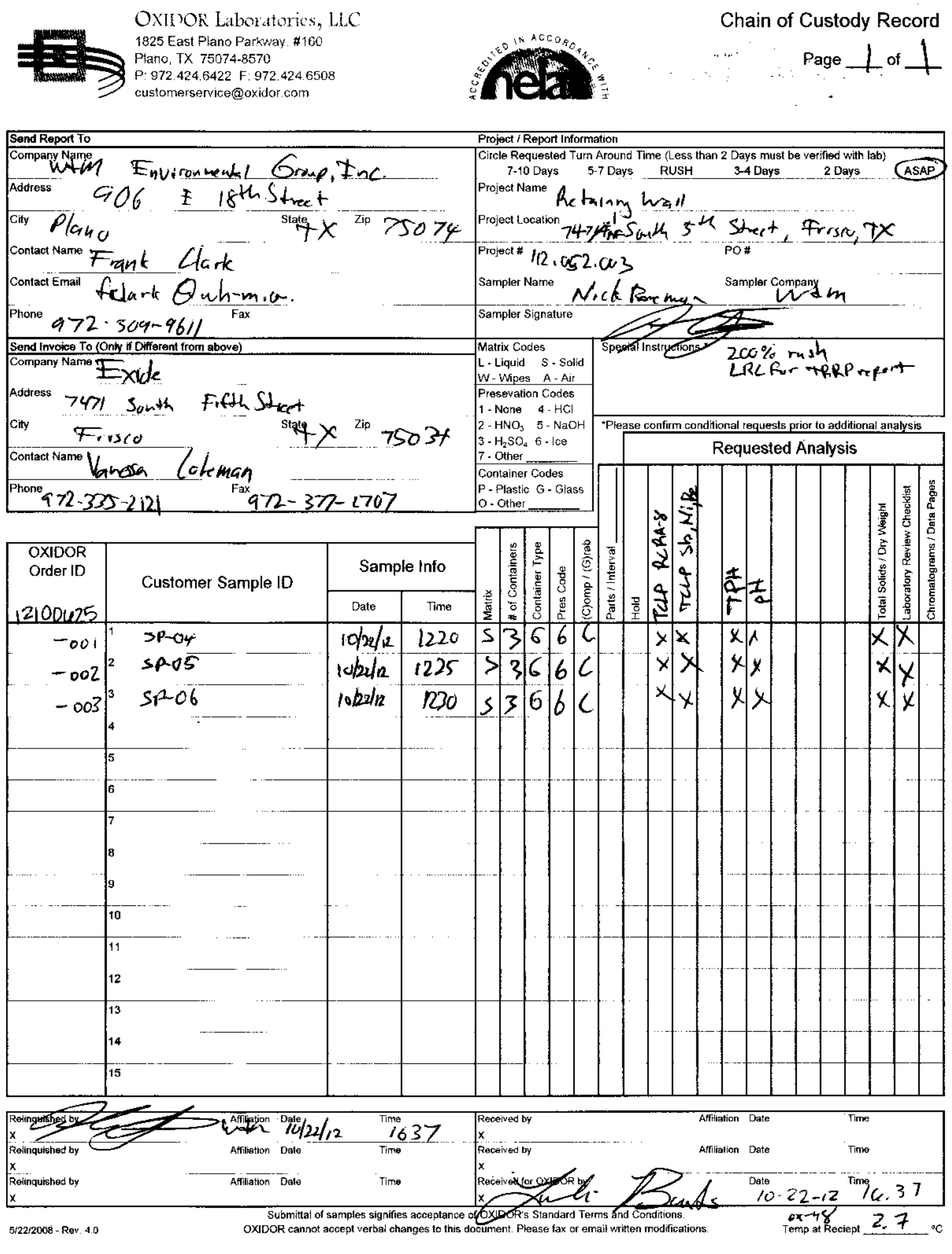
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

L.J.

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



OXIDOR Laboratories, LLC
1825 East Plano Parkway. #160
Plano, TX 75074-8570
P: 972.424.6422 F: 972.424.6508
customerservice@oxidor.com

Chain of Custody Record

Page 1 of 1

Send Report To

Company Name WHM Environmental Group, Inc.
Address 906 E 18th Street
City Plano State TX Zip 75074
Contact Name Frank Clark
Contact Email fclark@whm.com
Phone 972-509-9611 Fax

Project / Report Information

Circle Requested Turn Around Time (Less than 2 Days must be verified with lab)
7-10 Days 5-7 Days RUSH 3-4 Days 2 Days [✓ ASAP]
Project Name Retaining Wall
Project Location 7471 ~~Ave~~ South 5th Street, Frisco, TX
Project # 112.052.003 PO #
Sampler Name Nick Ramage Sampler Company WHM
Sampler Signature

Send Invoice To (Only if Different from above)

Company Name Exide
Address 7471 South Fifth Street
City Frisco State TX Zip 75034
Contact Name Vanessa Coleman
Phone 972-335-2121 Fax 972-377-2707

Matrix Codes
L - Liquid S - Solid
W - Wipes A - Air

Presevation Codes
1 - None 4 - HCl
2 - HNO_3 5 - NaOH
3 - H_2SO_4 6 - Ice
7 - Other ______

Container Codes
P - Plastic G - Glass
O - Other ______

Special Instructions* 200% rush
LRL for TRRP report

*Please confirm conditional requests prior to additional analysis

OXIDOR Order ID 12100625		Customer Sample ID	Sample Info Date	Sample Info Time	Matrix	# of Containers	Container Type	Pres Code	(C)omp / (G)rab	Parts / Interval ___	Hold	TCLP RCRA-8	TCLP Sb, Ni, Be		TPH	pH					Total Solids / Dry Weight	Laboratory Review Checklist	Chromatograms / Data Pages
-001	1	SP-04	10/22/12	1220	S	3	6	6	C			X	X		X	^					X	X	
-002	2	SP-05	10/22/12	1225	S	3	6	6	C			X	X		X	X					X	X	
-003	3	SP-06	10/22/12	1230	S	3	6	6	C			X	X		X	X					X	X	
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
	10																						
	11																						
	12																						
	13																						
	14																						
	15																						

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
x	WHM	10/22/12	1637	x			
x				x			
x				Received for OXIDOR by x Leslie Banks		10-22-12	16.37

Submittal of samples signifies acceptance of OXIDOR's Standard Terms and Conditions.
OXIDOR cannot accept verbal changes to this document. Please fax or email written modifications.

Temp at Reciept 2.7 °C ox-48

5/22/2008 - Rev. 4.0

OXIDOR Laboratories, LLC

OXIDOR Laboratory Review Checklist Cover Page

Project Name: **112.052.003 Retaining Wall**
7471 South Fifth Street, Frisco, TX
OXIDOR Job Number: **12110104 W&M Environmental Group, Inc.**

This data package consists of:

☒ This signature page, the laboratory review checklist, and the following reportable data:

- ☒ **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 TNI Standard Module 2, Section 5.10
  - 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) for each analyte for each method and matrix;
- ☒ **R10** Other problems or anomalies.

☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Charles Brungardt		President	November 7, 2012
Name	Signature	Official Title	Date

Laboratory Review Checklist: Reportable Data

Laboratory Name: OXIDOR Laboratories, LLC
LRC Date: November 7, 2012
Project Name: 112.052.003 Retaining Wall
Laboratory Job Number: 12110104 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III
QC Batch Number(s): See Cross-reference List

#^{1}	A^2	Description	Yes	No	NA^3	NR^4	ER#^{5}
R1	OI	**Chain-of-Custody (C-O-C)**					
		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	**Sample Quality Control (QC) and identification**					
		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	**Test reports**					
		Were all samples prepared and analyzed within holding times?		X			**ER#1**
		Other than those results < MDL, 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 quantitation 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				
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?	X				
		Were surrogate recoveries in all samples within the laboratory QC limits?	X				
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the required 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	**Laboratory Control Samples (LCS)**					
		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				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data**					
		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			**ER#2**
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		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	**Method Quantitation Limits (MQLs)**					
		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 included in the laboratory data package?	X				
		Does the detectability check sample (DCS) data document the laboratory's capability to detect the COCs at the MQL used to calculate the SQLs?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for all analytes, matrices, and methods associated with this LRC?	X				
		Was applicable and available technology used to lower the SQL to minimize any matrix interference effects on the sample results?	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 "No" or "NR" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: OXIDOR Laboratories, LLC
LRC Date: November 7, 2012
Project Name: 112.052.003 Retaining Wall
Laboratory Job Number: 12110104 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III
QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		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	**Initial / continuing calibration verification (ICV / CCV) and continuing calibration blanks (CCB)**					
		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	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (TNI Standard Module 2, Section 5.10)**					
		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	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results - Metals**					
		Were percent recoveries within the method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions - Metals**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) studies**					
		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	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analysis NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Capability (DOC)**					
		Was DOC conducted consistent with TNI Standard Module 4, Section 1.6?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (TNI Standard Module 4, Section 1.5)**					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		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 "No" or "NR" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: November 7, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12110104 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

ER#[1]	DESCRIPTION
ER#1	For pH, samples should be analyzed as soon as possible and preferably at the time of collection for Oxidor Sample ID's 12110104-001 and -002.
ER#2	Metals MS and MSD percent recoveries of Selenium for QC Batch ID META_04546_L (Oxidor Sample ID 12110105-001) were below Oxidor QC limits.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "No" or "NR" is checked on the LRC)

OXIDOR Laboratories, LLC

T104704227-12-7

Wednesday, November 07, 2012

W&M Environmental Group, Inc.
Frank Clark
906 E. 18th, Suite 100
Plano, TX 75074
Tel: (972) 516-0300 Fax: (972) 516-4145

Re: Project Name: Retaining Wall
Project Number: 112.052.003
Project Location: 7471 South Fifth Street, Frisco, TX

Oxidor received 2 solid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
12110104-001	SP-07	Solid	11/5/2012 09:00	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons
12110104-002	SP-08	Solid	11/5/2012 09:00	Dry Weight, pH, TCLP Antimony, TCLP Arsenic, TCLP Barium, TCLP Berylium, TCLP Cadmium, TCLP Chromium, TCLP Lead, TCLP Mercury, TCLP Metals Extraction, TCLP Nickel, TCLP Selenium, TCLP Silver, Total Petroleum Hydrocarbons

Respectfully submitted,

Charles Brungardt
President

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-07**
Oxidor Sample ID: 12110104-001
Sample Received: 11/5/2012
Matrix: **Solid**
Sample Collected: **11/5/2012 09:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**84.8**	%	11/05/12 15:25	Dry Weight	J.H.	
pH	0.1	0.1	**9.3**	pH Units	11/05/12 18:00	9045	M.B.	S-12
Metals								
Digested by method 3005A on 11/06/12 at 09:45								
TCLP Antimony	0.05	0.050	**0.122**	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Barium	0.05	0.050	**0.454**	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.496**	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Lead	0.05	0.050	**1.21**	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	11/06/12 14:34	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	11/06/12 14:34	6020	K.O.	*
TCLP Silver	0.01	0.010	ND	mg/L	11/06/12 14:34	6020	K.O.	
Digested by method 7470A on 11/06/12 at 09:35								
TCLP Mercury	0.001	0.001	ND	mg/L	11/06/12 17:02	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 11/05/12 at 10:00								
TPH (C 6 to C12)	25	29.5	ND	mg/Kg	11/05/12 14:57	TX 1005	K.J.	
TPH (C12 to C28)	25	29.5	ND	mg/Kg	11/05/12 14:57	TX 1005	K.J.	
TPH (C28 to C35)	25	29.5	ND	mg/Kg	11/05/12 14:57	TX 1005	K.J.	
TPH (C6 to C35)	25	29.5	ND	mg/Kg	11/05/12 14:57	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	88.7	mg/Kg	100 mg/Kg	89%	70-130%
o-Terphenyl	87.4	mg/Kg	100 mg/Kg	87%	70-130%

Sample Prep

TCLP Metals Extraction

Parameter	Date Analyzed	Method	Analyst
TCLP Extraction	11/05/12 15:45	1311	H.B.

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-08**
Oxidor Sample ID: 12110104-002
Matrix: **Solid**
Sample Received: 11/5/2012
Sample Collected: **11/5/2012 09:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
% Solids	0.1	0.1	**85.0**	%	11/05/12 15:25	Dry Weight	J.H.	
pH	0.1	0.1	**9.3**	pH Units	11/05/12 18:00	9045	M.B.	S-12
Metals								
Digested by method 3005A on 11/06/12 at 09:45								
TCLP Antimony	0.05	0.050	**0.126**	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Arsenic	0.05	0.050	ND	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Barium	0.05	0.050	**0.434**	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Berylium	0.05	0.050	ND	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Cadmium	0.01	0.010	**0.468**	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Chromium	0.05	0.050	ND	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Lead	0.05	0.050	**0.635**	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Nickel	0.05	0.050	ND	mg/L	11/06/12 14:40	6020	K.O.	
TCLP Selenium	0.05	0.050	ND	mg/L	11/06/12 14:40	6020	K.O.	*
TCLP Silver	0.01	0.010	ND	mg/L	11/06/12 14:40	6020	K.O.	
Digested by method 7470A on 11/06/12 at 09:35								
TCLP Mercury	0.001	0.001	ND	mg/L	11/06/12 17:04	7470A	T.C.	
Total Petroleum Hydrocarbons								
Prepared by method TX 1005 on 11/05/12 at 10:00								
TPH (C 6 to C12)	25	29.4	ND	mg/Kg	11/05/12 15:52	TX 1005	K.J.	
TPH (C12 to C28)	25	29.4	ND	mg/Kg	11/05/12 15:52	TX 1005	K.J.	
TPH (C28 to C35)	25	29.4	ND	mg/Kg	11/05/12 15:52	TX 1005	K.J.	
TPH (C6 to C35)	25	29.4	ND	mg/Kg	11/05/12 15:52	TX 1005	K.J.	

Surrogate	Result	Units	Spike Conc	Recovery	Rec Limits
1-chlorooctane	88.3	mg/Kg	100 mg/Kg	88%	70-130%
o-Terphenyl	87.5	mg/Kg	100 mg/Kg	88%	70-130%

Sample Prep

TCLP Metals Extraction

Parameter	Date Analyzed	Method	Analyst
TCLP Extraction	11/05/12 15:45	1311	H.B.

W&M Environmental Group, Inc.
Frank Clark

Sample Cross Reference

Project Name: **Retaining Wall**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
SP-07	12110104-001	Total Petroleum Hydrocarbons	TX 1005	1005_05729AS
		Dry Weight	Dry Weight	DW___09726_S
		TCLP Mercury	7470A	MERC_13023_L
		TCLP Antimony	6020	META_04546_L
		TCLP Arsenic	6020	META_04546_L
		TCLP Barium	6020	META_04546_L
		TCLP Berylium	6020	META_04546_L
		TCLP Cadmium	6020	META_04546_L
		TCLP Chromium	6020	META_04546_L
		TCLP Lead	6020	META_04546_L
		TCLP Nickel	6020	META_04546_L
		TCLP Selenium	6020	META_04546_L
		TCLP Silver	6020	META_04546_L
		pH	9045	PH___08615_S
SP-08	12110104-002	Total Petroleum Hydrocarbons	TX 1005	1005_05729AS
		Dry Weight	Dry Weight	DW___09726_S
		TCLP Mercury	7470A	MERC_13023_L
		TCLP Antimony	6020	META_04546_L
		TCLP Arsenic	6020	META_04546_L
		TCLP Barium	6020	META_04546_L
		TCLP Berylium	6020	META_04546_L
		TCLP Cadmium	6020	META_04546_L
		TCLP Chromium	6020	META_04546_L
		TCLP Lead	6020	META_04546_L
		TCLP Nickel	6020	META_04546_L
		TCLP Selenium	6020	META_04546_L
		TCLP Silver	6020	META_04546_L
		pH	9045	PH___08615_S

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**DW___09726_S**								
Replicate	% Solids	84.3 %	84.8 %				0.6%	0-20%	
QCBatchID	**PH___08615_S**								
LCS	pH	7.0 pH Units		7 pH Units	100%	99-102%			
LCSD	pH	7.0 pH Units		7 pH Units	100%	99-102%	0.0%	0-25%	
Replicate	pH	9.3 pH Units	9.3 pH Units				0.0%	0-10%	
QCBatchID	**MERC_13023_L**								
Blank	TCLP Mercury	ND mg/L							
LCS	TCLP Mercury	0.005 mg/L		0.005 mg/L	103%	85-115%			
LCSD	TCLP Mercury	0.005 mg/L		0.005 mg/L	106%	85-115%	6.2%	0-25%	
MS	TCLP Mercury	0.022 mg/L	ND	0.02 mg/L	110%	80-120%			
MSD	TCLP Mercury	0.022 mg/L	ND	0.02 mg/L	110%	80-120%	0.1%	0-25%	
QCBatchID	**META_04546_L**								
Blank	TCLP Antimony	ND mg/L							
	TCLP Arsenic	ND mg/L							
	TCLP Barium	ND mg/L							
	TCLP Berylium	ND mg/L							
	TCLP Cadmium	ND mg/L							
	TCLP Chromium	ND mg/L							
	TCLP Lead	ND mg/L							
	TCLP Nickel	ND mg/L							
	TCLP Selenium	ND mg/L							
	TCLP Silver	ND mg/L							
LCS	TCLP Antimony	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Arsenic	0.104 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Barium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	TCLP Berylium	0.101 mg/L		0.1 mg/L	101%	85-115%			
	TCLP Cadmium	0.105 mg/L		0.1 mg/L	105%	85-115%			
	TCLP Chromium	0.104 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Lead	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Nickel	0.103 mg/L		0.1 mg/L	103%	85-115%			
	TCLP Selenium	0.104 mg/L		0.1 mg/L	104%	85-115%			
	TCLP Silver	0.104 mg/L		0.1 mg/L	104%	85-115%			
LCSD	TCLP Antimony	0.099 mg/L		0.1 mg/L	99%	85-115%	4.1%	0-20%	
	TCLP Arsenic	0.102 mg/L		0.1 mg/L	102%	85-115%	2.1%	0-20%	
	TCLP Barium	0.096 mg/L		0.1 mg/L	96%	85-115%	3.7%	0-20%	
	TCLP Berylium	0.098 mg/L		0.1 mg/L	98%	85-115%	3.4%	0-20%	
	TCLP Cadmium	0.101 mg/L		0.1 mg/L	101%	85-115%	4.2%	0-20%	
	TCLP Chromium	0.100 mg/L		0.1 mg/L	100%	85-115%	4.0%	0-20%	
	TCLP Lead	0.099 mg/L		0.1 mg/L	99%	85-115%	4.3%	0-20%	
	TCLP Nickel	0.101 mg/L		0.1 mg/L	101%	85-115%	1.8%	0-20%	
	TCLP Selenium	0.101 mg/L		0.1 mg/L	101%	85-115%	2.5%	0-20%	
	TCLP Silver	0.100 mg/L		0.1 mg/L	100%	85-115%	3.5%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_04546_L**								
MS	TCLP Antimony	0.530 mg/L	ND	0.5 mg/L	106%	80-120%			
	TCLP Arsenic	0.527 mg/L	ND	0.5 mg/L	106%	80-120%			
	TCLP Barium	0.848 mg/L	0.368 mg/L	0.5 mg/L	96%	80-120%			
	TCLP Berylium	0.487 mg/L	ND	0.5 mg/L	98%	80-120%			
	TCLP Cadmium	0.506 mg/L	ND	0.5 mg/L	101%	80-120%			
	TCLP Chromium	0.496 mg/L	ND	0.5 mg/L	99%	80-120%			
	TCLP Lead	0.480 mg/L	ND	0.5 mg/L	96%	80-120%			
	TCLP Nickel	0.540 mg/L	ND	0.5 mg/L	108%	80-120%			
	TCLP Selenium	0.347 mg/L	0.078 mg/L	0.5 mg/L	54%	80-120%			Q-7
	TCLP Silver	0.495 mg/L	ND	0.5 mg/L	99%	80-120%			
MSD	TCLP Antimony	0.521 mg/L	ND	0.5 mg/L	104%	80-120%	1.6%	0-20%	
	TCLP Arsenic	0.526 mg/L	ND	0.5 mg/L	105%	80-120%	0.2%	0-20%	
	TCLP Barium	0.845 mg/L	0.368 mg/L	0.5 mg/L	95%	80-120%	0.4%	0-20%	
	TCLP Berylium	0.480 mg/L	ND	0.5 mg/L	96%	80-120%	1.4%	0-20%	
	TCLP Cadmium	0.500 mg/L	ND	0.5 mg/L	100%	80-120%	1.1%	0-20%	
	TCLP Chromium	0.480 mg/L	ND	0.5 mg/L	96%	80-120%	3.4%	0-20%	
	TCLP Lead	0.480 mg/L	ND	0.5 mg/L	96%	80-120%	0.0%	0-20%	
	TCLP Nickel	0.538 mg/L	ND	0.5 mg/L	108%	80-120%	0.3%	0-20%	
	TCLP Selenium	0.316 mg/L	0.078 mg/L	0.5 mg/L	48%	80-120%	9.4%	0-20%	Q-7
	TCLP Silver	0.492 mg/L	ND	0.5 mg/L	98%	80-120%	0.7%	0-20%	
QCBatchID	**1005_05729AS**								
Blank	TPH (C 6 to C12)	ND mg/Kg							
	TPH (C12 to C28)	ND mg/Kg							
	TPH (C28 to C35)	ND mg/Kg							
	TPH (C6 to C35)	ND mg/Kg							
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	90.6 mg/Kg		100 mg/Kg	91%	70-130%			
	o-Terphenyl	89.1 mg/Kg		100 mg/Kg	89%	70-130%			
LCS	TPH (C6 to C35)	89.9 mg/Kg		100 mg/Kg	90%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	89.2 mg/Kg		100 mg/Kg	89%	70-130%			
	o-Terphenyl	88.3 mg/Kg		100 mg/Kg	88%	70-130%			
LCSD	TPH (C6 to C35)	92.9 mg/Kg		100 mg/Kg	93%	75-125%	3.3%	0-20%	
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	89.6 mg/Kg		100 mg/Kg	90%	70-130%			
	o-Terphenyl	88.2 mg/Kg		100 mg/Kg	88%	70-130%			
MS	TPH (C6 to C35)	98.6 mg/Kg	ND	100 mg/Kg	99%	75-125%			
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	92.3 mg/Kg		100 mg/Kg	92%	70-130%			
	o-Terphenyl	90.8 mg/Kg		100 mg/Kg	91%	70-130%			
MSD	TPH (C6 to C35)	99.0 mg/Kg	ND	100 mg/Kg	99%	75-125%	0.4%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**1005_05729AS**								
Surrogate		**Result**		**Spike Conc**	**Recovery**	**Rec Limits**			
	1-chlorooctane	93.4 mg/Kg		100 mg/Kg	93%	70-130%			
	o-Terphenyl	93.7 mg/Kg		100 mg/Kg	94%	70-130%			

W&M Environmental Group, Inc.
Frank Clark

Case Narrative

Project Name: **Retaining Wall**

Q-7	Recovery and/or RPD outside desirable limits.
S-12	Sample should be analyzed as soon as possible and preferably at the time of collection.
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5

This report is intended only for the use of W&M Environmental Group, Inc. and may contain information that is privileged and confidential. It may not be reproduced in full (or in part) without the expressed written permission of W&M Environmental Group, Inc. and Oxidor Laboratories, LLC.

Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

W&M Environmental Group, Inc.
Frank Clark

Sample Preservation Verification

Project Name: **Retaining Wall**

Receipt temp: **3.8 °C on Ice**
Receipt method: **Client**
Custody seal intact: **Not Present**

All samples / labels received intact: **Yes**

Customer Sample ID: **SP-07**
Oxidor Sample ID: **12110104-001**
Collected: **11/05/12 09:00**

Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Customer Sample ID: **SP-08**
Oxidor Sample ID: **12110104-002**
Collected: **11/05/12 09:00**

Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

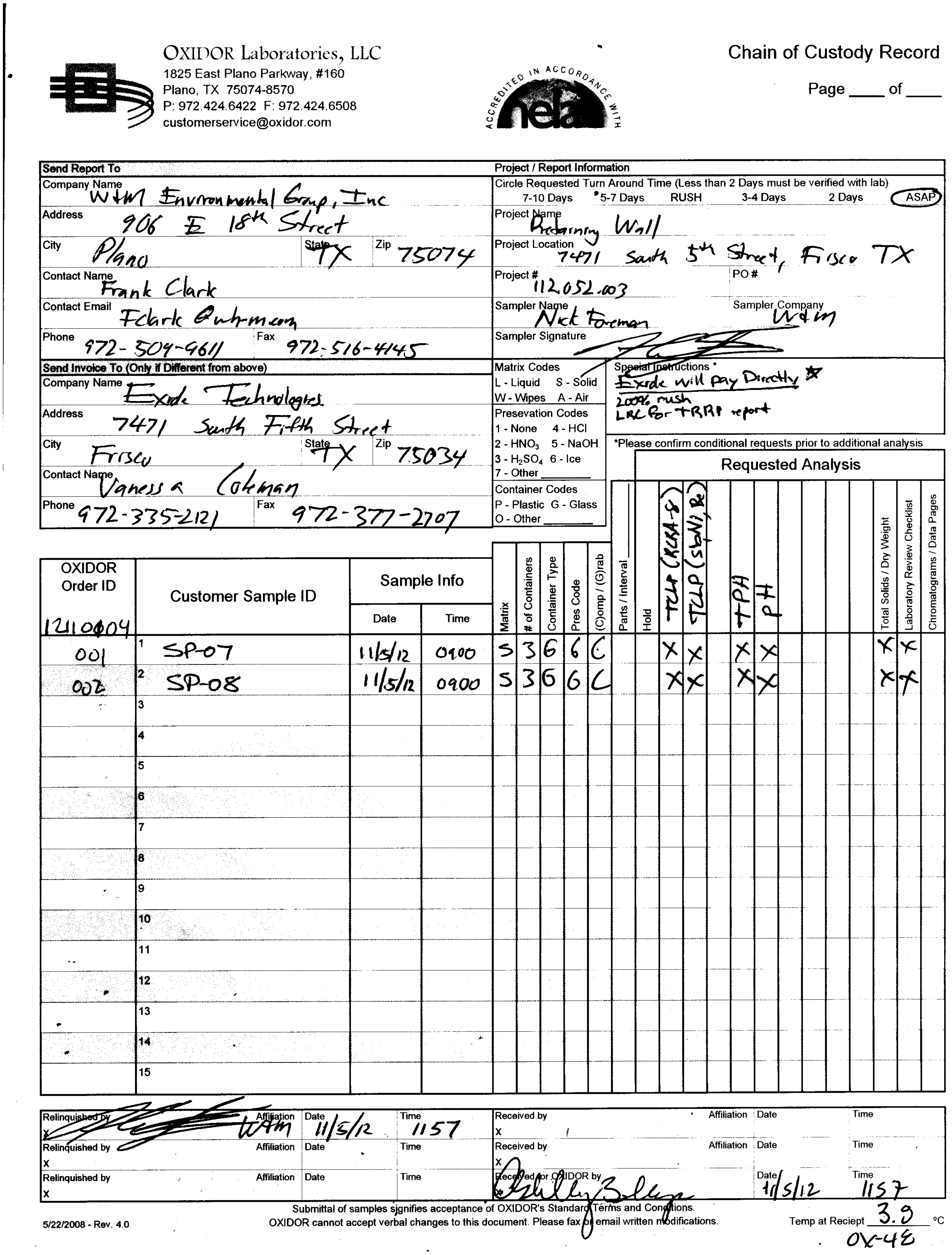
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

A.B.

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



OXIDOR Laboratories, LLC
1825 East Plano Parkway, #160
Plano, TX 75074-8570
P: 972.424.6422 F: 972.424.6508
customerservice@oxidor.com

Chain of Custody Record

Page ____ of ____

Send Report To

Company Name: WtM Environmental Group, Inc
Address: 906 E 18th Street
City: Plano State: TX Zip: 75074
Contact Name: Frank Clark
Contact Email: Fclark @wtm.com
Phone: 972-509-9611 Fax: 972-516-4145

Project / Report Information

Circle Requested Turn Around Time (Less than 2 Days must be verified with lab)
7-10 Days *5-7 Days RUSH 3-4 Days 2 Days [✓ ASAP]
Project Name: Retaining Wall
Project Location: 7471 South 5th Street, Frisco TX
Project #: 112.052.003 PO #:
Sampler Name: Nick Foreman Sampler Company: WtM
Sampler Signature:

Send Invoice To (Only if Different from above)

Company Name: Exide Technologies
Address: 7471 South Fifth Street
City: Frisco State: TX Zip: 75034
Contact Name: Vanessa Coleman
Phone: 972-335-2121 Fax: 972-377-2707

Matrix Codes
L - Liquid S - Solid
W - Wipes A - Air

Presevation Codes
1 - None 4 - HCl
2 - HNO_3 5 - NaOH
3 - H_2SO_4 6 - Ice
7 - Other ________

Container Codes
P - Plastic G - Glass
O - Other ________

Special Instructions *
Exide will pay Directly ☆
200% rush
LRC for TRRP report

*Please confirm conditional requests prior to additional analysis

OXIDOR Order ID	Customer Sample ID	Sample Info		Matrix	# of Containers	Container Type	Pres Code	(C)omp / (G)rab	Parts / Interval ____	Hold	TCLP (RCRA-8)	TCLP (Sb,Ni,Be)		TPH	pH					Total Solids / Dry Weight	Laboratory Review Checklist	Chromatograms / Data Pages
12110104		Date	Time								Requested Analysis											
001	1 SP-07	11/5/12	0900	S	3	G	6	C			X	X		X	X					X	X	
002	2 SP-08	11/5/12	0900	S	3	G	6	C			X	X		X	X					X	X	
	3																					
	4																					
	5																					
	6																					
	7																					
	8																					
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
X	WtM	11/5/12	1157	X			
Relinquished by X				Received by X			
Relinquished by X				Received for OXIDOR by X		11/5/12	1157

Submittal of samples signifies acceptance of OXIDOR's Standard Terms and Conditions.
OXIDOR cannot accept verbal changes to this document. Please fax or email written modifications.

5/22/2008 - Rev. 4.0

Temp at Reciept 3.9 °C
OX-48

OXIDOR Laboratories, LLC

OXIDOR Laboratory Review Checklist Cover Page

Project Name: **112.052.003 Retaining Wall**
7471 South Fifth Street, Frisco, TX
OXIDOR Job Number: **12110274 W&M Environmental Group, Inc.**

This data package consists of:

☒ This signature page, the laboratory review checklist, and the following reportable data:

- ☒ **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 TNI Standard Module 2, Section 5.10
  - 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) for each analyte for each method and matrix;
- ☒ **R10** Other problems or anomalies.

☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Charles Brungardt		President	November 12, 2012
Name	Signature	Official Title	Date

Laboratory Review Checklist: Reportable Data

Laboratory Name: OXIDOR Laboratories, LLC
LRC Date: November 12, 2012
Project Name: 112.052.003 Retaining Wall
Laboratory Job Number: 12110274 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III
QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		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	**Sample Quality Control (QC) and identification**					
		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	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MDL, 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 quantitation 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		
		If required for the project, TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the required 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	**Laboratory Control Samples (LCS)**					
		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				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) data**					
		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	**Analytical duplicate data**					
		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	**Method Quantitation Limits (MQLs)**					
		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 included in the laboratory data package?	X				
		Does the detectability check sample (DCS) data document the laboratory's capability to detect the COCs at the MQL used to calculate the SQLs?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for all analytes, matrices, and methods associated with this LRC?	X				
		Was applicable and available technology used to lower the SQL to minimize any matrix interference effects on the sample results?	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 "No" or "NR" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: November 12, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12110274 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		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	**Initial / continuing calibration verification (ICV / CCV) and continuing calibration blanks (CCB)**					
		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	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal Standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (TNI Standard Module 2, Section 5.10)**					
		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	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results - Metals**					
		Were percent recoveries within the method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions - Metals**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) studies**					
		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	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analysis NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Capability (DOC)**					
		Was DOC conducted consistent with TNI Standard Module 4, Section 1.6?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (TNI Standard Module 4, Section 1.5)**					
		Are all methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs)**					
		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 "No" or "NR" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: OXIDOR Laboratories, LLC	LRC Date: November 12, 2012
Project Name: 112.052.003 Retaining Wall	Laboratory Job Number: 12110274 W&M Environmental Group, Inc.
Reviewer Name: James A. Narens, III	QC Batch Number(s): See Cross-reference List

ER#[1]	DESCRIPTION

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "No" or "NR" is checked on the LRC)

Monday, November 12, 2012

W&M Environmental Group, Inc.
Frank Clark
906 E. 18th, Suite 100
Plano, TX 75074
Tel: (972) 516-0300 Fax: (972) 516-4145

Re: Project Name: Retaining Wall
Project Number: 112.052.003
Project Location: 7471 South Fifth Street, Frisco, TX

Oxidor received 1 solid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
12110274-001	SP-07	Solid	11/5/2012 09:00	TCLP Cadmium, TCLP Metals Extraction

Respectfully submitted,

Charles Brungardt
President

W&M Environmental Group, Inc.
Frank Clark

Analytical Report

Project Name: **Retaining Wall**

Customer Sample ID: **SP-07**
Oxidor Sample ID: 12110274-001
Sample Received: 11/8/2012
Matrix: **Solid**
Sample Collected: **11/5/2012 09:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Sample Prep								
TCLP Metals Extraction								
TCLP Extraction					11/08/12 16:40	1311	H.B.	
Metals								
Digested by method 3005A on 11/09/12 at 09:40								
TCLP Cadmium	0.01	0.010	**0.335**	mg/L	11/09/12 16:17	6020	K.O.	

W&M Environmental Group, Inc.
Frank Clark

Sample Cross Reference

Project Name: **Retaining Wall**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
SP-07	12110274-001	TCLP Cadmium	6020	META_06046_L

W&M Environmental Group, Inc.
Frank Clark

QC Summary

Project Name: **Retaining Wall**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_06046_L**								
Blank	TCLP Cadmium	ND mg/L							
LCS	TCLP Cadmium	0.103 mg/L		0.1 mg/L	103%	85-115%			
LCSD	TCLP Cadmium	0.102 mg/L		0.1 mg/L	102%	85-115%	1.1%	0-20%	
MS	TCLP Cadmium	0.850 mg/L	0.335 mg/L	0.5 mg/L	103%	80-120%			
MSD	TCLP Cadmium	0.833 mg/L	0.335 mg/L	0.5 mg/L	100%	80-120%	2.0%	0-20%	

W&M Environmental Group, Inc.
Frank Clark

Case Narrative

Project Name: **Retaining Wall**

ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5

This report is intended only for the use of W&M Environmental Group, Inc. and may contain information that is privileged and confidential. It may not be reproduced in full (or in part) without the expressed written permission of W&M Environmental Group, Inc. and Oxidor Laboratories, LLC.

Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

W&M Environmental Group, Inc.
Frank Clark

Sample Preservation Verification

Project Name: **Retaining Wall**

Receipt temp: **3.8 °C on Ice**
Receipt method: **Additional Analysis**
Custody seal intact: **Not Present**
All samples / labels received intact: **Yes**

Customer Sample ID: **SP-07**
Oxidor Sample ID: **12110274-001**
Collected: **11/05/12 09:00**
Collected By: **Nick Foreman**
Collector Affiliation: **W&M Environmental Group, Inc.**
Matrix: **Solid**

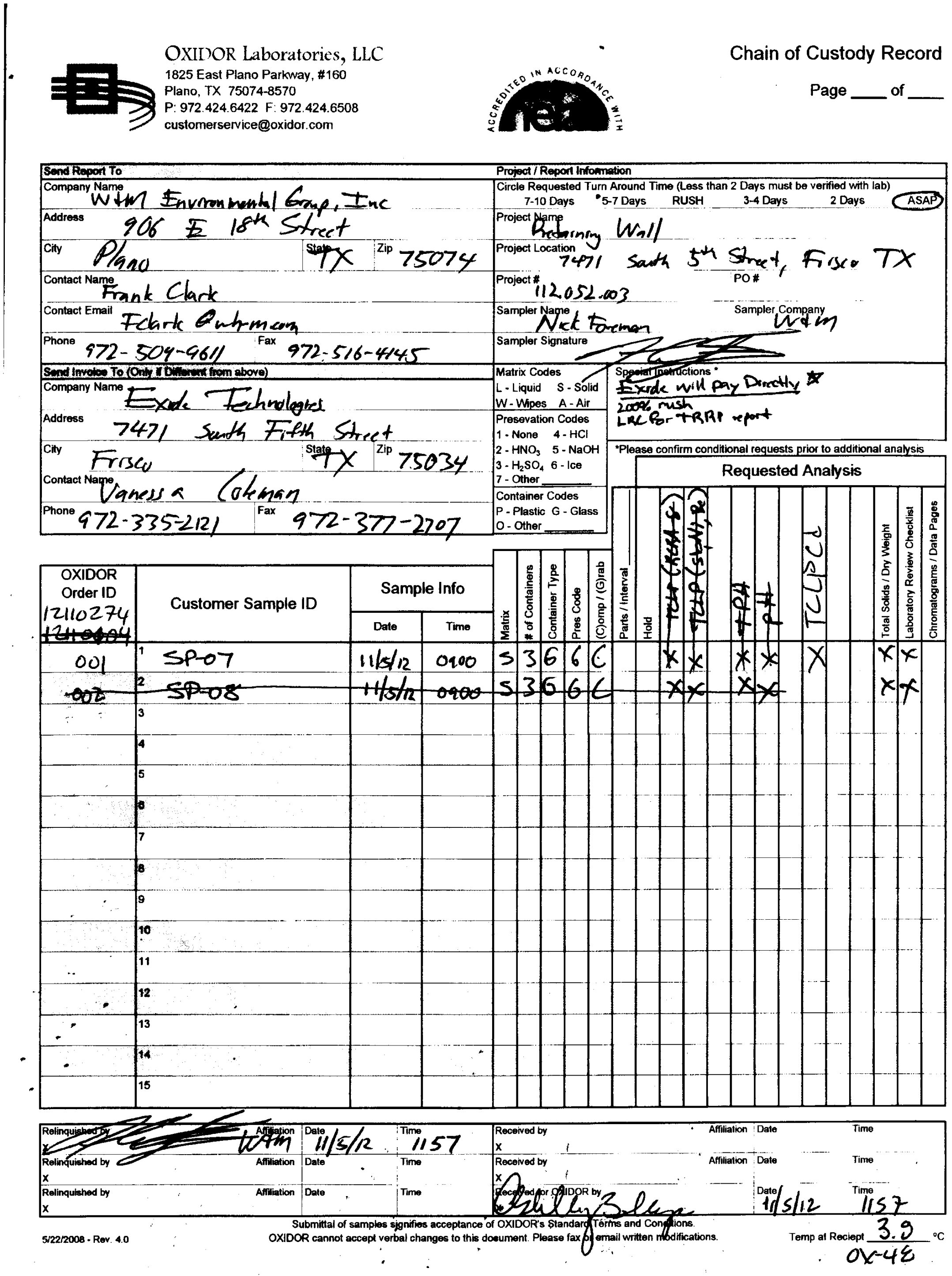
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
4 oz Glass Jar	3	Composite		Temp	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

A.B.

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



OXIDOR Laboratories, LLC
1825 East Plano Parkway, #160
Plano, TX 75074-8570
P: 972.424.6422 F: 972.424.6508
customerservice@oxidor.com

Chain of Custody Record

Page ____ of ____

Send Report To

Company Name: WtM Environmental Group, Inc
Address: 906 E 18th Street
City: Plano State: TX Zip: 75074
Contact Name: Frank Clark
Contact Email: Fclark @wtmmcom
Phone: 972-504-9611 Fax: 972-516-4145

Project / Report Information

Circle Requested Turn Around Time (Less than 2 Days must be verified with lab)
7-10 Days •5-7 Days RUSH 3-4 Days 2 Days [✓ ASAP]
Project Name: Retaining Wall
Project Location: 7471 South 5th Street, Frisco TX
Project #: 112.052.003 PO #
Sampler Name: Nick Foreman Sampler Company: WtM
Sampler Signature

Send Invoice To (Only if Different from above)

Company Name: Exide Technologies
Address: 7471 South Fifth Street
City: Frisco State: TX Zip: 75034
Contact Name: Vanessa Coleman
Phone: 972-335-2121 Fax: 972-377-2707

Matrix Codes
L - Liquid S - Solid
W - Wipes A - Air

Presevation Codes
1 - None 4 - HCl
2 - HNO_3 5 - NaOH
3 - H_2SO_4 6 - Ice
7 - Other ________

Container Codes
P - Plastic G - Glass
O - Other ________

Special Instructions *
Exide will pay Directly ☆
200% rush
LRC for TRRP report

*Please confirm conditional requests prior to additional analysis

Requested Analysis

OXIDOR Order ID 12110274 ~~12110004~~		Customer Sample ID	Sample Info Date	Time	Matrix	# of Containers	Container Type	Pres Code	(C)omp / (G)rab	Parts / Interval	Hold	~~TCLP (RCRA 8)~~	~~TCLP (Sb,Ni,Be)~~		~~TPH~~	~~pH~~		TCLP Cd			Total Solids / Dry Weight	Laboratory Review Checklist	Chromatograms / Data Pages
001	1	SP-07	11/5/12	0900	S	3	6	6	C			X	X		X	X		X			X	X	
~~002~~	2	~~SP-08~~	~~11/5/12~~	~~0900~~	~~S~~	~~3~~	~~6~~	~~6~~	~~C~~			~~X~~	~~X~~		~~X~~	~~X~~					X	X	
	3																						
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
	10																						
	11																						
	12																						
	13																						
	14																						
	15																						

Relinquished by	Affiliation	Date	Time	Received by	Affiliation	Date	Time
X	WtM	11/5/12	1157	X			
Relinquished by X				Received by X			
Relinquished by X				Received for OXIDOR by		11/5/12	1157

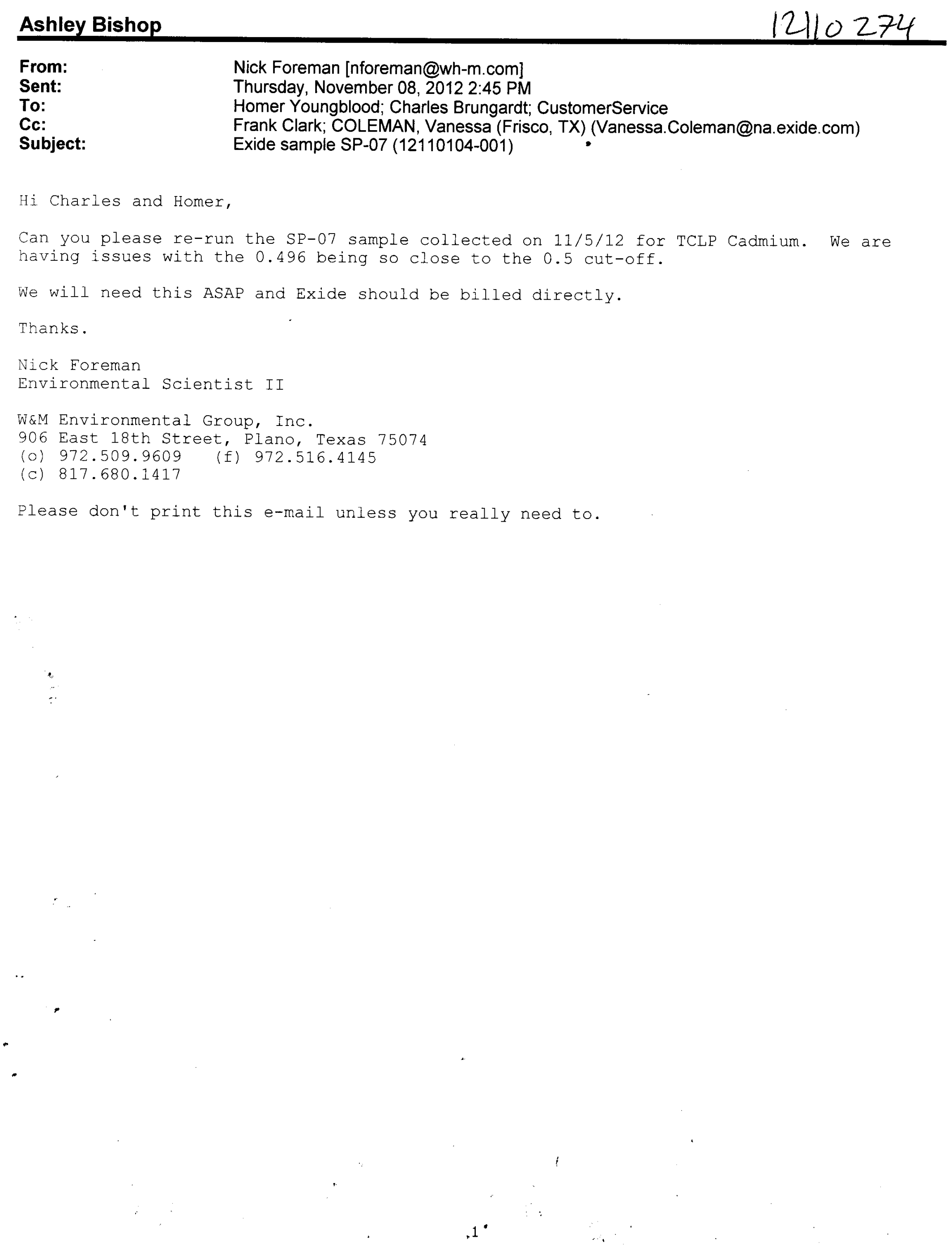
5/22/2008 - Rev. 4.0

Submittal of samples signifies acceptance of OXIDOR's Standard Terms and Conditions.
OXIDOR cannot accept verbal changes to this document. Please fax or email written modifications.

Temp at Reciept 3.9 °C
OX-48

Chain of Custody

PROJECT DESCRIPTION: **Retaining Wall**



Ashley Bishop 12110274

From: Nick Foreman [nforeman@wh-m.com]
Sent: Thursday, November 08, 2012 2:45 PM
To: Homer Youngblood; Charles Brungardt; CustomerService
Cc: Frank Clark; COLEMAN, Vanessa (Frisco, TX) (Vanessa.Coleman@na.exide.com)
Subject: Exide sample SP-07 (12110104-001)

Hi Charles and Homer,

Can you please re-run the SP-07 sample collected on 11/5/12 for TCLP Cadmium. We are having issues with the 0.496 being so close to the 0.5 cut-off.

We will need this ASAP and Exide should be billed directly.

Thanks.

Nick Foreman
Environmental Scientist II

W&M Environmental Group, Inc.
906 East 18th Street, Plano, Texas 75074
(o) 972.509.9609 (f) 972.516.4145
(c) 817.680.1417

Please don't print this e-mail unless you really need to.

1

WASTE DISPOSAL MANIFESTS – STOCKPILED SOILS FROM TRENCH EXCAVATION

ATTACHMENT D

643915

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: TXD006451090

2. Page 1 of: 1

3. Emergency Response Phone: (800)424-9300

4. Manifest Tracking Number: 009996407 JJK

5. Generator's Name and Mailing Address

EXIDE TECHNOLOGIES
7471 S 5TH ST
FRISCO TX 75034-0005

Generator's Site Address (if different than mailing address)

Generator's Phone: (872)335-2121

6. Transporter 1 Company Name: SET Environmental Inc

U.S. EPA ID Number: ILD981957236 ~~LA0000472272~~ 64

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT
7170 JOHN BRANNON RD.
SULPHUR LA 70665

U.S. EPA ID Number: LAD000777201

Facility's Phone: (337)583-2169

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, HAZARDOUS WASTE, SOLID NOS, 9, III, (D008) ~~956403GA~~	001	CM	25# ~~0020~~	GN ~~20~~ Y	D008 ~~D006~~
	2. LB5576					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

ERG# 171 BOX 114

IN CASE OF EMERGENCY CONTACT CHEMTREC 800-424-9300. (WM CONTRACT #:CCN4557)

DISCREPANCIES CONTACT (972)786-5446

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: CARLILE, WENDELL A.

Signature: Wendell A. Carlile

Month 11 Day 14 Year 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.

Port of entry/exit:

Transporter signature (for exports only):

Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Gary Holcomb

Signature: Gary Holcomb

Month 11 Day 14 Year 12

Transporter 2 Printed/Typed Name

Signature

Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

X N/C 11-15-12

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H132 (W)
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Leigh Anne Cole

Signature

Month 11 Day 15 Year 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Date 11/15/
Time 11:40:2

WASTE MANAGEMENT

Chemical Waste Management
Data Error/Discrepancy Report

Page . . :
Program name

CHEMICAL WASTE MANAGEMENT, INC.
7170 John Brannon Road
Sulphur, LA 70665
(337) 583-2169

Report Initiation Date: 11/15/12
Five Day Resolution Period Begin Date: 11/16/12

Initiated By [illegible]0348TMK

Receiving Ticket: 000643915 Line # 1
Profile Number : 956103LA
Generator Name : EXIDE TECHNOLOGIES
City : FRISCO
State: TX

Manifest : 009996407JJK
Federal EPA ID#: TXD006451090
Zip Code : 75034-0005

TYPE OF DISCREPANCY

Manifest* :
Weight* :
Analytical* :
Drum Count* :
LDR Form* :
Physical St* : X

Problem (be specific): Physical State SD

BULK WASTE MANIFESTED AS PROFILE 956103LA, SOIL FROM RETAINING WALL PROJECT FOR TREATMENT AT STABILIZATION. THE LOAD RECEIVED CONTAINS LARGE PIECES OF CUT UP THICK PLASTIC. WE CANNOT TREAT DEBRIS. WE CAN MACRO DEBRIS.

* IS THIS THE RIGHT PROFILE FOR THIS WASTE?

Efforts to resolve discrepancy: PER VANESSA COLEMAN/RICK CONNOR THE CORRECT PROFILE NUMBER IS LB5576. CHANGE THE PAPERWORK TO REFLECT THE CORRECTION.

Resolved: X
Time In : 0:08:36

Unresolved:
Time Out : 0:11:33

Pandora Nunez
Authorized Signature

Date Resolved: 11/15/12

** END OF REPORT **

Date 11/16/
Time 10:56:

WASTE MANAGEMENT

Chemical Waste Management
Data Error/Discrepancy Report

Page . . :
Program name

CHEMICAL WASTE MANAGEMENT, INC.
7170 John Brannon Road
Sulphur, LA 70665
(337) 583-2169

Initiated By : WM0348DR1

Report Initiation Date: 11/15/12
Five Day Resolution Period Begin Date: 11/16/12

Receiving Ticket: 000643915 Line # 1
Profile Number : LB5576
Generator Name : EXIDE TECHNOLOGIES
City : FRISCO
State: TX

Manifest : 009996407JJK

Federal EPA ID#: TXD006451090
Zip Code : 75034-0005

TYPE OF DISCREPANCY

Manifest* :
Drum Count* :
Weight* : X
LDR Form* :
Analytical* :
Physical St* :

Problem (be specific): Total Quantity

PTHERE IS A GREATER THAN 10% VOLUME DISCREPANCY. MANIFESTED FOR 20 YARDS; CWM'S VOLUME IS 25 YARDS.

Efforts to resolve discrepancy: PER VANESSA COLEMAN OK TO USE CWM'S VOLUME OF 25 YARDS AND CHANGE THE PAPERWORK TO REFLECT THE CORRECTION.

Resolved: X
Time In : 0:16:40

Unresolved:
Time Out : 0:08:40

Pandora Nunez
Authorized Signature

Date Resolved: 11/16/12

** END OF REPORT **

L043568

SR# 992200

CWMI

Form Approved. OMB No. 2050-0039

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: TXD006451090

2. Page 1 of: 1

3. Emergency Response Phone: (800)424-9300

4. Manifest Tracking Number: 009996497 JJK

5. Generator's Name and Mailing Address

EXIDE TECHNOLOGIES
7471 S 5TH ST
FRISCO TX 75034-0005

Generator's Phone: (972)335-2121

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Chemical waste management Inc

U.S. EPA ID Number: LaD000147272

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT
7170 JOHN BRANNON RD.
SULPHUR LA 70665

Facility's Phone: (337)583-2169

U.S. EPA ID Number: LAD000777201

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE,SOLID,NOS,9,III, (D008) 956103LA	1	DT	46180	P	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

ERG#-01/171.

IN CASE OF EMERGENCY CONTACT CHEMTREC 800-424-9300. (WM CONTRACT #:CCN4557)

DISCREPANCIES CONTACT (972)786-5446

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: CARLILE, WENDELL S.

Signature: Wendell S. Carlile

Month 11 Day 06 Year 12

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.

Port of entry/exit:

Transporter signature (for exports only):

Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Randy Smith

Signature: Randy Smith

Month 11 Day 6 Year 12

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)

Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H132	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Shaun Laws

Signature

Month 11 Day 7 Year 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

4461

SR# 983510

CWMI

UNIFORM HAZARDOUS WASTE MANIFEST

Form Approved. OMB No. 2050-0039

1. Generator ID Number: TXD006451090
2. Page 1 of: 1
3. Emergency Response Phone: (800)424-9300
4. Manifest Tracking Number: 009996826 JJK

5. Generator's Name and Mailing Address

EXIDE TECHNOLOGIES
7471 S 5TH ST
FRISCO TX 75034-0005

Generator's Site Address (if different than mailing address)

Generator's Phone: (972)335-2121

6. Transporter 1 Company Name: Chemical Waste Management Inc.
U.S. EPA ID Number: LA0000147272

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT
7170 JOHN BRANNON RD.
SULPHUR LA 70665

Facility's Phone: (337)583-2169

U.S. EPA ID Number: LAD000777201

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3077,HAZARDOUS WASTE,SOLID,NOS,9,III,(D008) 956103LA	1	DT	26,660	P	D008
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

ERG#—01/171.

IN CASE OF EMERGENCY CONTACT CHEMTREC 800-424-9300. (WM CONTRACT #:CCN4557)

DISCREPANCIES CONTACT C. Wendell (972) 786-5446

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: CARLILE, WENDELL L.
Signature: Wendell L. Carlile
Month Day Year: 11 29 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter signature (for exports only):
Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: George [illegible] III
Signature
Month Day Year: 11 29 12

Transporter 2 Printed/Typed Name
Signature
Month Day Year

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1. H132
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: [illegible] Anne Clark
Signature
Month Day Year: 11 29 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1250879

Name Exide Technologies
Address PO Box 250
Frisco TX 75034
Phone No. 972 335-2121

Generating Location Exide Technologies
7471 South 5th St; Frisco, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
~~[illegible]~~	~~116829TX~~	~~Soil, Concrete & Debris~~		Y
~~0102513702~~	~~957829TX~~			
D0027302 2	958041TX	SOIL FROM RETAINING WALL	20 yds	Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL D. AUTHORIZED AGENT'S NAME (PRINT) 9/11/12 DATE Wendell D. Carlile SIGNATURE

TRANSPORTER

Transporter's Name ~~[illegible]~~ GREEN SCAPING
Address ~~[illegible]~~ 2401 HANDLEY EDERVILLE RD.
~~[illegible]~~ FORT WORTH, TX 76118
Phone No. ~~[illegible]~~ (817) 577-9299
Driver's name Travis Orr
Vehicle No. 844 / 865

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

9-11-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 9-11-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S Railroad Street
Lewisville TX 75067
Permit No. 1025 B
Phone No. (972)459-1213
Time 2:24PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

R Reed NAME (PRINT) 9/11/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1250878

Name Exide Technologies
Address P O Box 250
Frisco TX 75034
Phone No. 972 335-2121

Generating Location Exide Technologies
7471 South 5th St. Frisco, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
~~[illegible]~~	~~[illegible]~~	~~Soil, Concrete & Debris~~		Y
~~[illegible]~~	~~957829TX~~			
00273022	958041TX	SOIL FROM RETAINING WALL	20yds	Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL S. AUTHORIZED AGENT'S NAME (PRINT) 9/11/12 DATE Wendell S. Carlile SIGNATURE

TRANSPORTER

Transporter's Name ~~[illegible]~~ GREEN SCAPING
Address ~~[illegible]~~ 2401 HANDLEY EDERVILLE RD.
~~[illegible]~~ FORT WORTH, TX 76118

Phone No. ~~[illegible]~~ (817) 577-9299
Driver's name Travis Orr
Vehicle No. 846/846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

9-11-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 9-11-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address [illegible] S. Railroad Street
Lewisville TX 75057
Permit No. [illegible]

Phone No. (972)459-[illegible]
Time 1203pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT) 9/11/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1250880

Name Exide Technologies
Address PO Box 250
Frisco TX 75034
Phone No. 972 335-2121

Generating Location Exide Technologies
7471 South 5th St; Frisco, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[illegible]	~~[illegible]~~	~~Soil, Concrete & Debris~~		Y
~~[illegible]~~	~~[illegible]~~			
00273022	95804ITX	SOIL FROM RETAINING WALL	20 yds	Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT)
9/11/12 DATE
Wendell Carlile SIGNATURE

TRANSPORTER

Transporter's Name ~~[illegible]~~ GREEN SCAPING
Address ~~100 W State Hwy 22~~ 2401 HANLEY EDERVILLE RD
~~[illegible]~~ FORT WORTH, TX 76118

Phone No. ~~[illegible]~~ (817) 577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

9-11-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
9-11-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S Railroad Street
Permit No. 1025 B

Phone No. (972)455 1210
Lewisville TX 75067
Time 459pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Lune NAME (PRINT)
9/11/12 DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252654

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
002273022	958041TX	SOIL FROM RRTAING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L. — AUTHORIZED AGENT'S NAME (PRINT)
10-1-12 — DATE
Wendell L. Carlile — SIGNATURE

TRANSPORTER

Transporter's Name [redacted] GreenScaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-1-12 — SHIPMENT DATE
Travis Orr — DRIVER'S SIGNATURE
10-1-12 — DELIVERY DATE
Travis Orr — DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name [illegible]
Address [illegible]
[illegible]
Permit No. ____
Phone No. [illegible]
[illegible]
Time 4:03 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Barley — NAME (PRINT)
10-1-12 — DATE
K Barley — SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252655

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00273022	958041TX	SOIL FROM RETAING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A.
AUTHORIZED AGENT'S NAME (PRINT)
10-1-12
DATE
Wendell A. Carlile
SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Seeding
Address [redacted] 2401 Handley Ederville Rd
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-1-12
SHIPMENT DATE
Travis Orr
DRIVER'S SIGNATURE
10-1-12
DELIVERY DATE
Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 600 S RAILROAD STREET
LEWISVILLE TX 75057
Permit No. 1025
Phone No. (972)459-1712
Time 2:46PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
10/01/12
DATE
A. Reed
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____________
Ticket No. ____________

GENERATOR

WMI 1252656

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00273022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L.
AUTHORIZED AGENT'S NAME (PRINT)
10-2-12
DATE
Wendell L Carlile
SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 86U

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-2-12
SHIPMENT DATE
Travis Orr
DRIVER'S SIGNATURE
10-2-12
DELIVERY DATE
Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 E RAILROAD STREET
LEWISVILLE TX 75067
Permit No. [illegible]
Phone No. (972)459-1213
Time 9.17 AM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

R. Reed
NAME (PRINT)
10/02/12
DATE
R. Reed
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252657

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	10	Y
00273022	95804ITX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLISLE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT) 10-2-12 DATE Wendell A. Carlisle SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-2-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-2-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name [illegible]
Address 1600 S RAILROAD STREET
Permit No. [illegible]

Phone No. (972)459-121[illegible]
LEWISVILLE TX 7505[illegible]
Time 1040 Am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Lu NAME (PRINT) 10/2/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252658

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
002730122	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL S. AUTHORIZED AGENT'S NAME (PRINT)
10-2-12 DATE
Wendell S. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-2-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
10-2-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75057
Permit No. 1025 B
Phone No. (972)459-1913
Time 12-11PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Reed NAME (PRINT)
10/2/12 DATE
K Reed SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252659

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 y/s	Y
00127@P122	95804ITX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT) 10-2-12 DATE Wendell A. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scooping
Address [redacted] 2401 Handley Ederville
[redacted] Ft Worth Tx 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-2-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-2-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RD
Address 1600 S RAILROAD STREET
Permit No. 1025

Phone No. (972) 459 1210
LEWISVILLE TX 75067
Time 349 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT) 10/2/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252660

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00223022	95R041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT) 10-2-12 DATE Wendell A. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx 76118

Phone No. [redacted] 817-577-9399
Driver's name Travis Orr
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-2-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-2-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1000 S RAILROAD STREET
Permit No. 1025B

Phone No. (972)459-1213
LEWISVILLE TX 75057
Time 1:56PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

A. Reed NAME (PRINT) 10/02/12 DATE A. Reed SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS
WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252661

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8yds	Y
002730222	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL J. AUTHORIZED AGENT'S NAME (PRINT)
10-3-12 DATE
Wendell J. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] GreenScaping
Address [redacted] 2401 Handley Ederville Rd
[redacted] Ft. Worth Tx. 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-3-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
10-3-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
Permit No. [illegible]

Phone No. 9724594213
LEWISVILLE TX 75067
Time 9:46am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
10/3/12 DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252662

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	4 yds	Y
00273022	95804ITX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL D. AUTHORIZED AGENT'S NAME (PRINT)
10-3-12 DATE
Wendell D. Carlile SIGNATURE

TRANSPORTER

Transporter's Name Green Scaping
Address [redacted] 2401 Handley Ederville Rd
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted]
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-3-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
10-3-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 E RAILROAD STREET
Permit No. 1025B
Phone No. (972)459 1210
LEWISVILLE TX 75067
Time 1201 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
10/3/12 DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WM
WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252663

Name EXIDE TECHNOLOGIES
Address PO BOX 2[illegible]
FRISCO TX 75034
Phone No. 972 335 212[illegible]

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	
002713022	9C8041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L.
AUTHORIZED AGENT'S NAME (PRINT)

10-5-12
DATE

Wendell L. Carlile
SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118

Phone No. [redacted] 817-577-9255
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-5-12
SHIPMENT DATE

Travis Orr
DRIVER'S SIGNATURE

10-5-12
DELIVERY DATE

Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address [illegible] S RAILROAD STREET
1025 [illegible]
Permit No. ____

Phone No. (972) [illegible]
LEWISVILLE TX 75057
Time 12:21 PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

A. Reed
NAME (PRINT)

10/5/12
DATE

A. Reed
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ______
Ticket No. ______

GENERATOR

WMI 1252664

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	
0002173P212	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. 24 OCT 2012 Wendell A. Carlile
AUTHORIZED AGENT'S NAME (PRINT) DATE SIGNATURE

TRANSPORTER

Transporter's Name GreenScape [redacted]
Address [redacted] Hensley Edelville Rd
[redacted] Ft. Worth Tx. 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 844/845

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-24-12 Travis Orr 10-24-12 Travis Orr
SHIPMENT DATE DRIVER'S SIGNATURE DELIVERY DATE DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name [illegible]
Address [illegible]
[illegible]
Permit No. [illegible]

Phone No. [illegible]
[illegible]
Time 120pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

10/24/12
NAME (PRINT) DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252670

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00273022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L. AUTHORIZED AGENT'S NAME (PRINT) 10-31-12 DATE Wendell L. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaling
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx 76118

Phone No. [redacted] 817 577-9299
Driver's name Travis Orr
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-31-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-31-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 600 E RAILROAD STREET
1025
Permit No.

Phone No. (972)459-1210
LEWISVILLE TX 75057
Time 124p

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT) 10/31/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS
WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252671

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	
0027 3022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL B. AUTHORIZED AGENT'S NAME (PRINT) 10-31-12 DATE Wendell B. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-31-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-31-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75067
Permit No. 1025-B

Phone No. (972)459-1216
Time 3:05 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Boxley NAME (PRINT) 10-31-12 DATE K Boxley SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ______
Ticket No. ______

GENERATOR

WMI 1252672

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]		Y
00273022	9580411TX	SOIL FROM RETAINING WALL	6/05	

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L. — AUTHORIZED AGENT'S NAME (PRINT)
11-1-12 — DATE
Wendell L. Carlile — SIGNATURE

TRANSPORTER

Transporter's Name [redacted]
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-1-12 — SHIPMENT DATE
Travis Orr — DRIVER'S SIGNATURE
11-1-12 — DELIVERY DATE
Travis Orr — DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75067
Permit No. 1025
Phone No. (972)459 1219
Time 1140am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
11/1/12 — DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ______
Ticket No. ______

GENERATOR

WMI 1252673

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
002730122	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL Jr
AUTHORIZED AGENT'S NAME (PRINT)
11-1-12
DATE
Wendell J. Carlile
SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft Worth Tx 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-1-12
SHIPMENT DATE
Travis Orr
DRIVER'S SIGNATURE
11-1-12
DELIVERY DATE
Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name [illegible]
Address [illegible] S RAILROAD STREET
LEWISVILLE TX 75067
Permit No. [illegible]
Phone No. (972)459 1213
Time 3:00 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Cow
NAME (PRINT)
11/1/12
DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ______
Ticket No. ______

GENERATOR

WMI 1252674

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8yds	Y
00273022	958011TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL Jr. AUTHORIZED AGENT'S NAME (PRINT)
11-1-12 DATE
Wendell B. Carlile SIGNATURE

TRANSPORTER

Transporter's Name GreenScaping [redacted]
Address [redacted] 2401 Handley Ederville Rd
[redacted] Ft. Worth Tx 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-1-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
11-1-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75057
Phone No. (972)459-1211
Permit No. 1025 B
Time 109 Am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
11/1/12 DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252675

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2111

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00223022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL B.
AUTHORIZED AGENT'S NAME (PRINT)
11-9-12
DATE
Wendell B. Carlile
SIGNATURE

TRANSPORTER

Transporter's Name GreenScaping [redacted]
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material ~~was~~ picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-9-12
SHIPMENT DATE
Travis Orr
DRIVER'S SIGNATURE
11-9-12
DELIVERY DATE
Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 RAILROAD STREET
LEWISVILLE TX 75057
Permit No. [illegible]
Phone No. (972)353-1212
Time

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Boxley
NAME (PRINT)
11-9-12
DATE
K Boxley
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252676

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-212

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30610
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00273022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT) 11-9-12 DATE Wendell A Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Phone No. [redacted] 817-577-9299
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth TX 76118
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-9-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 11-9-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Phone No. (972)459-[illegible]
Address [illegible]
LEWISVILLE TX 75067
Permit No. [illegible]
Time 1:53 PM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Boxley NAME (PRINT) 11-9-12 DATE K Boxley SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ____
Ticket No. ____

GENERATOR

WMI 1252677

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET; FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8yds	Y
010203022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL L. AUTHORIZED AGENT'S NAME (PRINT)
11-9-12 DATE
Wendell L. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-9-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
11-9-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
Permit No. 1025B

Phone No. (972)459-1012
LEWISVILLE TX 75057
Time 12:45 pm

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

K Boxley NAME (PRINT)
11-9-12 DATE
K Boxley SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252678

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8 yds	Y
00273022	958041TX	SOIL FROM RETAINING WALL		

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL D. AUTHORIZED AGENT'S NAME (PRINT) 10-31-12 DATE Wendell D. Carlile SIGNATURE

TRANSPORTER

Transporter's Name Green Scaping [redacted]
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76118
Phone No. [redacted] 817-577-9299
Driver's name Travis Orr
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-31-12 SHIPMENT DATE Travis Orr DRIVER'S SIGNATURE 10-31-12 DELIVERY DATE Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
Permit No. 1025A
Phone No. (972)459 1213
LEWISVILLE TX 75057
Time 1009 Am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Turner NAME (PRINT) 10/31/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252679

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335 2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]		
00270122	958041TX	SOIL FROM RETAINING WALL	8 yds	

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL J.
AUTHORIZED AGENT'S NAME (PRINT)
10-31-12
DATE
Wendell J. Carlile
SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Hardy Edenville Rd
[redacted] Ft. Worth Tx 76118
Phone No. [redacted] 817-577-5299
Driver's name Travis ORR
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

10-31-12
SHIPMENT DATE
Travis Orr
DRIVER'S SIGNATURE
10-31-12
DELIVERY DATE
Travis Orr
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RLF
Address 550 E [illegible] STREET
LEWISVILLE TX 75057
Permit No. [illegible]
Phone No. (972)459-1013
Time 1148 AM

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
10/31/12
DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252681

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]	8yds	[redacted]
00273022	958041TX	SOIL FROM RETAINING WALL		Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL D. AUTHORIZED AGENT'S NAME (PRINT) 19 NOV. 2012 DATE Wendell D. Carlile SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 8401 Handley Ederville
[redacted] Ft. Worth 76118

Phone No. [redacted] 817-577-9299
Driver's name Travis Old
Vehicle No. 846

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-19-12 SHIPMENT DATE Travis O DRIVER'S SIGNATURE 11-19-12 DELIVERY DATE Travis O DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75057
Permit No. [illegible]

Phone No. (972)459-1010
Time 1009 Am

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Troy Tum NAME (PRINT) 11/19/12 DATE SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1252682

Name EXIDE TECHNOLOGIES
Address PO BOX 250
FRISCO TX 75034
Phone No. 972 335-2121

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]		[redacted]
0022130122	95804ITX	SOIL FROM RETAINING WALL	8yds	Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE, WENDELL A. AUTHORIZED AGENT'S NAME (PRINT)
19 NOV. 2012 DATE
Wendell A. Carlile SIGNATURE

TRANSPORTER

Transporter's Name GreenScaploy [redacted]
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth Tx. 76116
Phone No. [redacted] 817-577-9299
Driver's name Travis Old
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-19-12 SHIPMENT DATE
Travis Orr DRIVER'S SIGNATURE
11-19-12 DELIVERY DATE
Travis Orr DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S RAILROAD STREET
LEWISVILLE TX 75057
Permit No. 1025-B
Phone No. (972)459 1215
Time 12:53

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
11-19-12 DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No. ______
Ticket No. ______

GENERATOR

WMI 1252683

Name [illegible]
Address [illegible]
[illegible]
Phone No. [illegible]

Generating Location EXIDE TECHNOLOGIES
7471 SOUTH FIFTH STREET, FRISCO, TX 75034
State Gen. ID No. [illegible]
Gen. US EPA ID No. [illegible]

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]		[redacted]
002713922	95804ITX	Soil From Retaining wall	6yds	Y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLISLE, WENDELL B. — AUTHORIZED AGENT'S NAME (PRINT)
19 NOV. 2012 — DATE
Wendell B. Carlisle — SIGNATURE

TRANSPORTER

Transporter's Name [redacted] Green Scaping
Address [redacted] 2401 Handley Ederville
[redacted] Ft. Worth 76118
Phone No. [redacted] 817-577-9255
Driver's name Travis ORR
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-19-12 — SHIPMENT DATE
Travis Orr — DRIVER'S SIGNATURE
11-19-20 — DELIVERY DATE
Travis Orr — DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name [illegible]
Address [illegible]
Permit No. [illegible]
Phone No. [illegible]
[illegible]
Time 2:05p

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

Debbie Caskey — NAME (PRINT)
11-19-12 — DATE
SIGNATURE

WASTE MANAGEMENT

NON-HAZARDOUS WASTE MANIFEST

FOR OFFICE USE ONLY
Customer Acc. No.
Ticket No.

GENERATOR

WMI 1312048

Name Exide Technologies
Address PO Box 250
Frisco TX 75034
Phone No. 972 335-2121

Generating Location Exide Technologies
7471 South 5th St; Frisco, TX 75034
State Gen. ID No. 30516
Gen. US EPA ID No. TXD006451090

WASTE CODE	PROFILE NUMBER	WASTE DESCRIPTION	QUANTITY	UNITS
[redacted]	[redacted]	[redacted]		[redacted]
00273022	958041TX	SOIL FROM RETAINING WALL	8yds	y

CODES: D = DRUM; B = BAG; C = CARTON; P = POUND; Y = YARDS; 0 = OTHER

I hereby certify that the above listed material(s), is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law. That each waste has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

CARLILE WENDELL J. — AUTHORIZED AGENT'S NAME (PRINT)
19 NOV. 2012 — DATE
SIGNATURE

TRANSPORTER

Transporter's Name GreenScaping
Address 2401 Handley Ederville Rd.
Ft. Worth TX. 76118

Phone No. 817-577-9299
Driver's name Travis Old
Vehicle No. 866

I hereby certify that the above listed material was picked up at the Generator site listed above and delivered without incident to the disposal facility listed below.

11-19-12 — SHIPMENT DATE
DRIVER'S SIGNATURE
11-19-12 — DELIVERY DATE
DRIVER'S SIGNATURE

DISPOSAL FACILITY

Site Name DFW RDF
Address 1600 S Railroad Street
Lewisville TX 75067
Permit No. 1025-B

Phone No. (972)316-2223
Time 11:25

I hereby certify that the above listed material has been accepted and that information presented on this document is true and accurate.

NAME (PRINT)
11-19-12 — DATE
SIGNATURE

White - Original • Canary - Transporter • Pink - Disposal Facility • Goldenrod - Generator

ATTACHMENT 2

FRENCH DRAIN INSPECTION REPORT FORM

GENERAL INFORMATION

Project Name & Location			
Date of Inspection		**Start/End Time**	
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			

Describe the current condition of the French Drain:

Weather at time of this inspection?

WEEKLY INSPECTION

	French Drain System Component	**Component Functioning?**	**Maintenance Required?**	**Corrective Action Needed & Notes**
1	Pump & Float - if water is present in the sump, manually actuate the pump float to verify operation. Is the pump inlet clear of obstructions?			
2	French Drain Outlet Pipe - is the outlet pipe above the pool of water in the sump? Yes is normal.			
3	French Drain Outlet Pipe - is the pipe free draining?			

QUARTERLY INSPECTION

4	French Drain Sump - is sediment collecting in the base of the sump?			
5	Flood Wall Waterstop and Joint Fillers - are waterstops and joint fillers in good condition?			
6	Flood Wall Inspection - Are there any areas indicating seepage through the floodwall or cracks or other signs of damage?			

	Distal Monitoring Well Measurements	**Depth to Water (feet below top of casing)**	**Total Depth (feet below top of casing)**	**Observations & Notes**
	MW-26			
	MW-29			
	MW-31			
	MW-32			
	MW-33			
	MW-34			
	MW-35			
	MW-46			

Attachment 2

DAILY FRENCH DRAIN INSPECTION REPORT FORM

Date/Time	Meter in Operation?	Totalizer Flow	Flow Rate	Name of Inspector

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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Golder Associates

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ATTCHMENT B

FRENCH DRAIN WATER LABORATORY ANALYTICAL RESULTS

OXIDOR Laboratories

NELAP ACCREDITED LABORATORY
TNI

Tuesday, April 28, 2015

Exide Technologies
David Mckercher
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Samples

Oxidor received 10 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
15040480-001	L042115-01	Liquid	4/21/2015 14:15	Sulfate, Total Dissolved Solids
15040480-002	L042115-02	Liquid	4/21/2015 14:15	Antimony, Arsenic, Cadmium, Lead, Selenium, Tin
15040480-003	S042115-01	Liquid	4/21/2015 14:25	Sulfate, Total Dissolved Solids
15040480-004	S042115-02	Liquid	4/21/2015 14:25	Antimony, Arsenic, Cadmium, Lead, Selenium, Tin
15040480-005	SPW042115-01	Liquid	4/21/2015 14:40	Sulfate, Total Dissolved Solids
15040480-006	SPW042115-02	Liquid	4/21/2015 14:40	Antimony, Arsenic, Cadmium, Lead, Selenium, Tin
15040480-007	FD042115-01	Liquid	4/21/2015 15:00	Sulfate, Total Dissolved Solids
15040480-008	FD042115-02	Liquid	4/21/2015 15:00	Antimony, Arsenic, Cadmium, Lead, Selenium, Tin
15040480-009	GW042115-01	Liquid	4/21/2015 15:20	Sulfate, Total Dissolved Solids
15040480-010	GW042115-02	Liquid	4/21/2015 15:20	Antimony, Arsenic, Cadmium, Lead, Selenium, Tin

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **L042115-01**
Oxidor Sample ID: 15040480-001
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 14:15**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Sulfate	1	1000	**22700**	mg/L	04/23/15 17:19	300.0	W.S.	D-1
Total Dissolved Solids	25	25.0	**41600**	mg/L	04/23/15 10:20	SM-2540-C	V.V.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **L042115-02**
Oxidor Sample ID: 15040480-002
Sample Received: 4/22/2015
Matrix: **Liquid**
Sample Collected: **4/21/2015 14:15**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/23/15 at 09:26								
Antimony	0.005	0.005	**1.61**	mg/L	04/27/15 10:55	200.8	G.S.	
Arsenic	0.005	0.500	**11.3**	mg/L	04/23/15 16:13	200.8	G.S.	D-1
Cadmium	0.001	0.0010	**0.0026**	mg/L	04/27/15 10:55	200.8	G.S.	
Lead	0.005	0.005	**0.041**	mg/L	04/27/15 10:55	200.8	G.S.	
Selenium	0.005	0.0050	**0.4487**	mg/L	04/27/15 10:55	200.8	G.S.	
Tin	0.01	0.010	**0.064**	mg/L	04/27/15 10:55	200.8	G.S.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **S042115-01**
Oxidor Sample ID: 15040480-003
Sample Received: 4/22/2015
Matrix: **Liquid**
Sample Collected: **4/21/2015 14:25**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Sulfate	1	1000	**24700**	mg/L	04/23/15 17:34	300.0	W.S.	D-1
Total Dissolved Solids	25	25.0	**42800**	mg/L	04/23/15 10:20	SM-2540-C	V.V.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **S042115-02**
Oxidor Sample ID: 15040480-004
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 14:25**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/22/15 at 12:03								
Antimony	0.005	0.005	**1.80**	mg/L	04/23/15 10:43	200.8	G.S.	
Arsenic	0.005	0.050	**2.04**	mg/L	04/23/15 11:36	200.8	G.S.	D-1
Cadmium	0.001	0.0010	**0.0011**	mg/L	04/23/15 10:43	200.8	G.S.	
Lead	0.005	0.005	**0.246**	mg/L	04/23/15 10:43	200.8	G.S.	
Selenium	0.005	0.0050	**0.5600**	mg/L	04/23/15 10:43	200.8	G.S.	
Tin	0.01	0.010	**0.045**	mg/L	04/23/15 10:43	200.8	G.S.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **SPW042115-01**
Oxidor Sample ID: 15040480-005
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 14:40**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Sulfate	1	10.0	**48.4**	mg/L	04/23/15 17:03	300.0	W.S.	D-1
Total Dissolved Solids	25	25.0	**110**	mg/L	04/23/15 10:20	SM-2540-C	V.V.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **SPW042115-02**
Oxidor Sample ID: 15040480-006
Sample Received: 4/22/2015
Matrix: **Liquid**
Sample Collected: **4/21/2015 14:40**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/22/15 at 12:03								
Antimony	0.005	0.005	**0.029**	mg/L	04/23/15 10:48	200.8	G.S.	
Arsenic	0.005	0.005	**0.011**	mg/L	04/23/15 10:48	200.8	G.S.	
Cadmium	0.001	0.0010	**0.0067**	mg/L	04/23/15 10:48	200.8	G.S.	
Lead	0.005	0.005	**0.284**	mg/L	04/23/15 10:48	200.8	G.S.	
Selenium	0.005	0.0050	**0.0110**	mg/L	04/23/15 10:48	200.8	G.S.	
Tin	0.01	0.010	ND	mg/L	04/23/15 10:48	200.8	G.S.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **FD042115-01**
Oxidor Sample ID: 15040480-007
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 15:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Sulfate	1	100	**1010**	mg/L	04/23/15 15:00	300.0	W.S.	D-1
Total Dissolved Solids	25	25.0	**1780**	mg/L	04/23/15 10:20	SM-2540-C	V.V.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **FD042115-02**
Oxidor Sample ID: 15040480-008
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 15:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/22/15 at 12:03								
Antimony	0.005	0.005	**0.088**	mg/L	04/23/15 10:50	200.8	G.S.	
Arsenic	0.005	0.005	**0.012**	mg/L	04/23/15 10:50	200.8	G.S.	
Cadmium	0.001	0.0010	**0.0097**	mg/L	04/23/15 10:50	200.8	G.S.	
Lead	0.005	0.005	**0.207**	mg/L	04/23/15 10:50	200.8	G.S.	
Selenium	0.005	0.0050	**0.0208**	mg/L	04/23/15 10:50	200.8	G.S.	
Tin	0.01	0.010	ND	mg/L	04/23/15 10:50	200.8	G.S.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **GW042115-01**
Oxidor Sample ID: 15040480-009
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 15:20**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Sulfate	1	100	**158**	mg/L	04/23/15 15:46	300.0	W.S.	D-1
Total Dissolved Solids	25	25.0	**505**	mg/L	04/23/15 10:20	SM-2540-C	V.V.	

Exide Technologies
David Mckercher

Analytical Report

Project Name: **Raw Samples**

Customer Sample ID: **GW042115-02**
Oxidor Sample ID: 15040480-010
Sample Received: 4/22/2015

Matrix: **Liquid**
Sample Collected: **4/21/2015 15:20**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/23/15 at 09:26								
Antimony	0.005	0.005	**0.018**	mg/L	04/23/15 16:15	200.8	G.S.	
Arsenic	0.005	0.005	ND	mg/L	04/23/15 16:15	200.8	G.S.	
Cadmium	0.001	0.0010	**0.0078**	mg/L	04/23/15 16:15	200.8	G.S.	
Lead	0.005	0.005	**0.351**	mg/L	04/23/15 16:15	200.8	G.S.	
Selenium	0.005	0.0050	ND	mg/L	04/23/15 16:15	200.8	G.S.	
Tin	0.01	0.010	ND	mg/L	04/23/15 16:15	200.8	G.S.	

Exide Technologies
David Mckercher

Sample Cross Reference

Project Name: **Raw Samples**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
L042115-01	15040480-001	Sulfate	300.0	IC___07715_L
		Total Dissolved Solids	SM-2540-C	TDS__04520_L
L042115-02	15040480-002	Cadmium	200.8	META_00254_L
		Arsenic	200.8	META_00254_L
		Lead	200.8	META_00254_L
		Selenium	200.8	META_00254_L
		Tin	200.8	META_00254_L
		Antimony	200.8	META_00254_L
S042115-01	15040480-003	Sulfate	300.0	IC___07715_L
		Total Dissolved Solids	SM-2540-C	TDS__04520_L
S042115-02	15040480-004	Tin	200.8	META_09753_L
		Selenium	200.8	META_09753_L
		Lead	200.8	META_09753_L
		Cadmium	200.8	META_09753_L
		Arsenic	200.8	META_09753_L
		Antimony	200.8	META_09753_L
SPW042115-01	15040480-005	Sulfate	300.0	IC___07715_L
		Total Dissolved Solids	SM-2540-C	TDS__04520_L
SPW042115-02	15040480-006	Lead	200.8	META_09753_L
		Selenium	200.8	META_09753_L
		Tin	200.8	META_09753_L
		Arsenic	200.8	META_09753_L
		Antimony	200.8	META_09753_L
		Cadmium	200.8	META_09753_L
FD042115-01	15040480-007	Sulfate	300.0	IC___07715_L
		Total Dissolved Solids	SM-2540-C	TDS__04520_L
FD042115-02	15040480-008	Antimony	200.8	META_09753_L
		Arsenic	200.8	META_09753_L
		Cadmium	200.8	META_09753_L
		Lead	200.8	META_09753_L
		Selenium	200.8	META_09753_L
		Tin	200.8	META_09753_L
GW042115-01	15040480-009	Sulfate	300.0	IC___07715_L
		Total Dissolved Solids	SM-2540-C	TDS__04520_L
GW042115-02	15040480-010	Tin	200.8	META_00254_L
		Arsenic	200.8	META_00254_L
		Cadmium	200.8	META_00254_L
		Lead	200.8	META_00254_L
		Selenium	200.8	META_00254_L
		Antimony	200.8	META_00254_L

Exide Technologies
David Mckercher

QC Summary

Project Name: **Raw Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**IC___07715_L**								
Blank	Sulfate	ND mg/L							
LCS	Sulfate	15.1 mg/L		15 mg/L	101%	90-110%			
LCSD	Sulfate	15.0 mg/L		15 mg/L	100%	90-110%	1.0%	0-20%	
MS	Sulfate	16.1 mg/L	0.64 mg/L	15 mg/L	103%	80-120%			
MSD	Sulfate	15.2 mg/L	0.64 mg/L	15 mg/L	97%	80-120%	5.8%	0-20%	
QCBatchID	**TDS__04520_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	970 mg/L		1000 mg/L	97%	90-110%			
LCSD	Total Dissolved Solids	965 mg/L		1000 mg/L	97%	90-110%	0.5%	0-5%	
Replicate	Total Dissolved Solids	1140 mg/L	1140 mg/L				0.0%	0-5%	
QCBatchID	**META_00254_L**								
Blank	Antimony	ND mg/L							
	Arsenic	ND mg/L							
	Cadmium	ND mg/L							
	Lead	ND mg/L							
	Selenium	ND mg/L							
	Tin	ND mg/L							
LCS	Antimony	0.106 mg/L		0.1 mg/L	106%	85-115%			
	Arsenic	0.108 mg/L		0.1 mg/L	108%	85-115%			
	Cadmium	0.1037 mg/L		0.1 mg/L	104%	85-115%			
	Lead	0.097 mg/L		0.1 mg/L	98%	85-115%			
	Selenium	0.0970 mg/L		0.1 mg/L	97%	85-115%			
	Tin	0.105 mg/L		0.1 mg/L	105%	85-115%			
LCSD	Antimony	0.106 mg/L		0.1 mg/L	106%	85-115%	0.2%	0-20%	
	Arsenic	0.107 mg/L		0.1 mg/L	107%	85-115%	0.9%	0-20%	
	Cadmium	0.1029 mg/L		0.1 mg/L	103%	85-115%	0.8%	0-20%	
	Lead	0.097 mg/L		0.1 mg/L	97%	85-115%	0.2%	0-20%	
	Selenium	0.1000 mg/L		0.1 mg/L	100%	85-115%	3.1%	0-20%	
	Tin	0.105 mg/L		0.1 mg/L	105%	85-115%	0.2%	0-20%	
MS	Antimony	0.526 mg/L	ND	0.5 mg/L	105%	80-120%			
	Arsenic	0.532 mg/L	0.002 mg/L	0.5 mg/L	106%	80-120%			
	Cadmium	0.5085 mg/L	ND	0.5 mg/L	102%	80-120%			
	Lead	0.483 mg/L	0.001 mg/L	0.5 mg/L	97%	80-120%			
	Selenium	0.4921 mg/L	0.003 mg/L	0.5 mg/L	98%	80-120%			
	Tin	0.477 mg/L	ND	0.5 mg/L	95%	80-120%			
MSD	Antimony	0.541 mg/L	ND	0.5 mg/L	108%	80-120%	2.8%	0-20%	
	Arsenic	0.554 mg/L	0.002 mg/L	0.5 mg/L	110%	80-120%	4.0%	0-20%	
	Cadmium	0.5188 mg/L	ND	0.5 mg/L	104%	80-120%	2.0%	0-20%	
	Lead	0.491 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%	1.6%	0-20%	
	Selenium	0.5298 mg/L	0.003 mg/L	0.5 mg/L	105%	80-120%	7.4%	0-20%	
	Tin	0.482 mg/L	ND	0.5 mg/L	96%	80-120%	1.0%	0-20%	
QCBatchID	**META_09753_L**								

Exide Technologies
David Mckercher

QC Summary

Project Name: **Raw Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_09753_L**								
Blank	Antimony	ND mg/L							
	Arsenic	ND mg/L							
	Cadmium	ND mg/L							
	Lead	ND mg/L							
	Selenium	ND mg/L							
	Tin	ND mg/L							
LCS	Antimony	0.512 mg/L		0.5 mg/L	102%	85-115%			
	Arsenic	0.521 mg/L		0.5 mg/L	104%	85-115%			
	Cadmium	0.5003 mg/L		0.5 mg/L	100%	85-115%			
	Lead	0.492 mg/L		0.5 mg/L	98%	85-115%			
	Selenium	0.5146 mg/L		0.5 mg/L	103%	85-115%			
	Tin	0.509 mg/L		0.5 mg/L	102%	85-115%			
LCSD	Antimony	0.512 mg/L		0.5 mg/L	102%	85-115%	0.0%	0-20%	
	Arsenic	0.512 mg/L		0.5 mg/L	102%	85-115%	1.7%	0-20%	
	Cadmium	0.4968 mg/L		0.5 mg/L	99%	85-115%	0.7%	0-20%	
	Lead	0.484 mg/L		0.5 mg/L	97%	85-115%	1.6%	0-20%	
	Selenium	0.4791 mg/L		0.5 mg/L	96%	85-115%	7.1%	0-20%	
	Tin	0.512 mg/L		0.5 mg/L	102%	85-115%	0.5%	0-20%	
MS	Antimony	0.529 mg/L	ND	0.5 mg/L	106%	80-120%			
	Arsenic	0.534 mg/L	0.003 mg/L	0.5 mg/L	106%	80-120%			
	Cadmium	0.5004 mg/L	ND	0.5 mg/L	100%	80-120%			
	Lead	0.496 mg/L	ND	0.5 mg/L	99%	80-120%			
	Selenium	0.5098 mg/L	ND	0.5 mg/L	102%	80-120%			
	Tin	0.528 mg/L	ND	0.5 mg/L	106%	80-120%			
MSD	Antimony	0.519 mg/L	ND	0.5 mg/L	104%	80-120%	1.9%	0-20%	
	Arsenic	0.536 mg/L	0.003 mg/L	0.5 mg/L	107%	80-120%	0.4%	0-20%	
	Cadmium	0.4921 mg/L	ND	0.5 mg/L	98%	80-120%	1.7%	0-20%	
	Lead	0.497 mg/L	ND	0.5 mg/L	99%	80-120%	0.2%	0-20%	
	Selenium	0.4618 mg/L	ND	0.5 mg/L	92%	80-120%	9.9%	0-20%	
	Tin	0.513 mg/L	ND	0.5 mg/L	103%	80-120%	2.9%	0-20%	

Exide Technologies
David Mckercher

Case Narrative

Project Name: **Raw Samples**

D-1	Elevated reporting limit(s) due to dilution. Dilution resulted from sample matrix interference, high target analyte(s), high non-target analyte(s) or a combination thereof.
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SQL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
David Mckercher

Sample Preservation Verification

Project Name: **Raw Samples**

Receipt temp: **0.5 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**

All samples / labels received intact: **Yes**

Customer Sample ID: **L042115-01**
Oxidor Sample ID: **15040480-001**
Collected: **04/21/15 14:15**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Customer Sample ID: **L042115-02**
Oxidor Sample ID: **15040480-002**
Collected: **04/21/15 14:15**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **S042115-01**
Oxidor Sample ID: **15040480-003**
Collected: **04/21/15 14:25**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Customer Sample ID: **S042115-02**
Oxidor Sample ID: **15040480-004**
Collected: **04/21/15 14:25**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SPW042115-01**
Oxidor Sample ID: **15040480-005**
Collected: **04/21/15 14:40**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Exide Technologies
David Mckercher

Sample Preservation Verification

Project Name: **Raw Samples**

Customer Sample ID: **SPW042115-02**
Oxidor Sample ID: **15040480-006**
Collected: **04/21/15 14:40**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **FD042115-01**
Oxidor Sample ID: **15040480-007**
Collected: **04/21/15 15:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Customer Sample ID: **FD042115-02**
Oxidor Sample ID: **15040480-008**
Collected: **04/21/15 15:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **GW042115-01**
Oxidor Sample ID: **15040480-009**
Collected: **04/21/15 15:20**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Customer Sample ID: **GW042115-02**
Oxidor Sample ID: **15040480-010**
Collected: **04/21/15 15:20**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

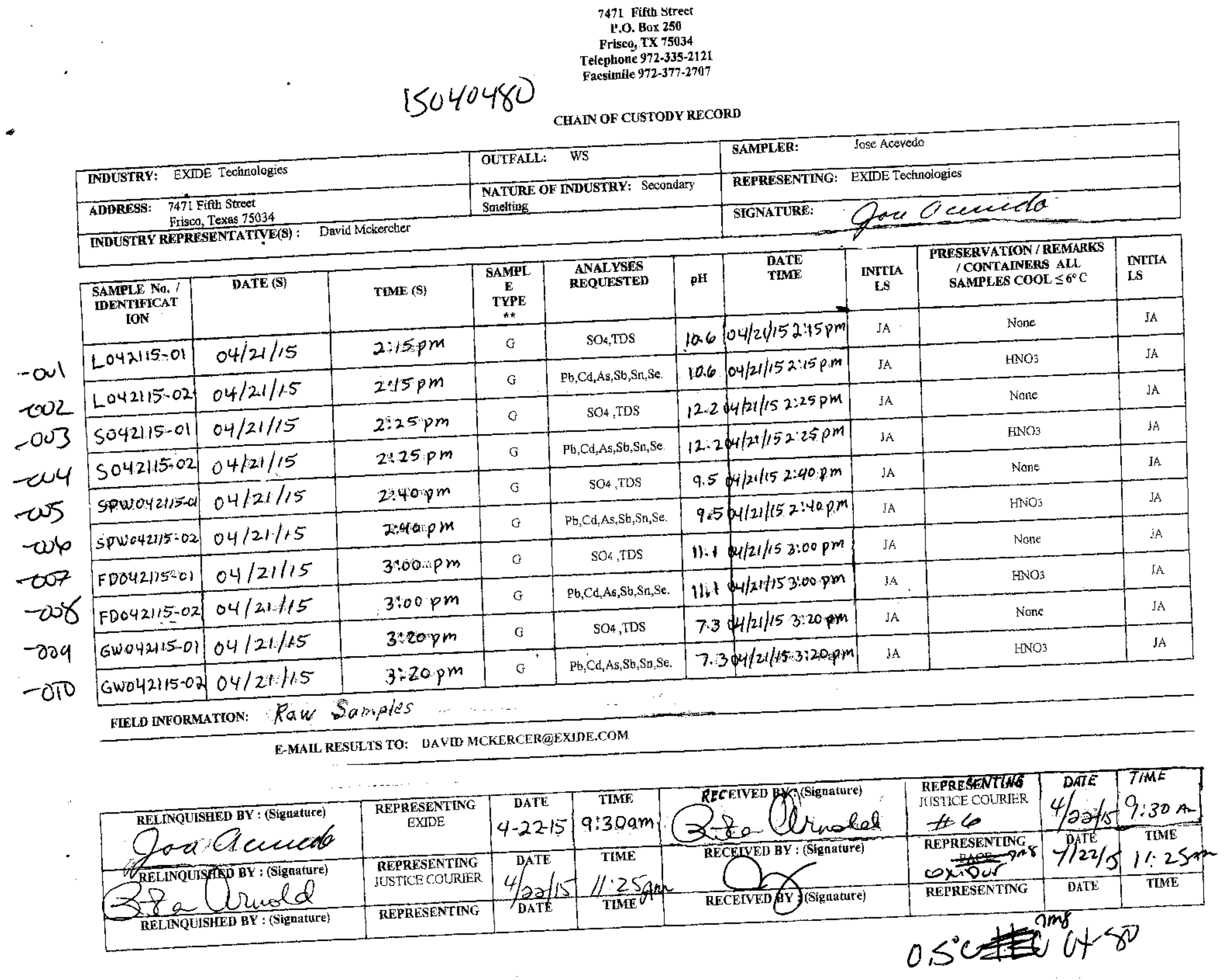
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

J.G.

Documentation

PROJECT DESCRIPTION: **Raw Samples**



7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

15040480

CHAIN OF CUSTODY RECORD

INDUSTRY: EXIDE Technologies
OUTFALL: WS
SAMPLER: Jose Acevedo
ADDRESS: 7471 Fifth Street
Frisco, Texas 75034
NATURE OF INDUSTRY: Secondary Smelting
REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE(S) : David Mckercher
SIGNATURE: Jose Acevedo

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIALS
-001	L042115-01	04/21/15	2:15pm	G	SO4,TDS	10.6	04/21/15 2:15pm	JA	None	JA
-002	L042115-02	04/21/15	2:15pm	G	Pb,Cd,As,Sb,Sn,Se.	10.6	04/21/15 2:15pm	JA	HNO3	JA
-003	S042115-01	04/21/15	2:25pm	G	SO4 ,TDS	12.2	04/21/15 2:25pm	JA	None	JA
-004	S042115-02	04/21/15	2:25pm	G	Pb,Cd,As,Sb,Sn,Se.	12.2	04/21/15 2:25pm	JA	HNO3	JA
-005	SPW042115-01	04/21/15	2:40pm	G	SO4 ,TDS	9.5	04/21/15 2:40pm	JA	None	JA
-006	SPW042115-02	04/21/15	2:40pm	G	Pb,Cd,As,Sb,Sn,Se.	9.5	04/21/15 2:40pm	JA	HNO3	JA
-007	FD042115-01	04/21/15	3:00pm	G	SO4 ,TDS	11.1	04/21/15 3:00pm	JA	None	JA
-008	FD042115-02	04/21/15	3:00pm	G	Pb,Cd,As,Sb,Sn,Se.	11.1	04/21/15 3:00pm	JA	HNO3	JA
-009	GW042115-01	04/21/15	3:20pm	G	SO4 ,TDS	7.3	04/21/15 3:20pm	JA	None	JA
-010	GW042115-02	04/21/15	3:20pm	G	Pb,Cd,As,Sb,Sn,Se.	7.3	04/21/15 3:20pm	JA	HNO3	JA

FIELD INFORMATION: Raw Samples

E-MAIL RESULTS TO: DAVID MCKERCER@EXIDE.COM

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	4-22-15	9:30am	Rita Arnold	JUSTICE COURIER #6	4/22/15	9:30 am
Rita Arnold	JUSTICE COURIER	4/22/15	11:25am		~~PACE~~ jms OXIDOR	4/22/15	11:25am

0.5°C jms 04-80

ATTACHMENT C

LABORATORY ANALYTICAL RESULTS PROVIDED BY THE CITY OF FRISCO

DRAFT

SURFACE WATER, SOLIDS AND DISCHARGE WATER SAMPLING ACTIVITIES RESULTS SUMMARY

For:
Stewart Creek – Former Operating Plant
Frisco, Collin County, Texas

Prepared for:
City of Frisco
c/o
Russell & Rodriguez, L.L.P.
1633 Williams Drive
Building 2, Suite 200
Georgetown, TX 78628

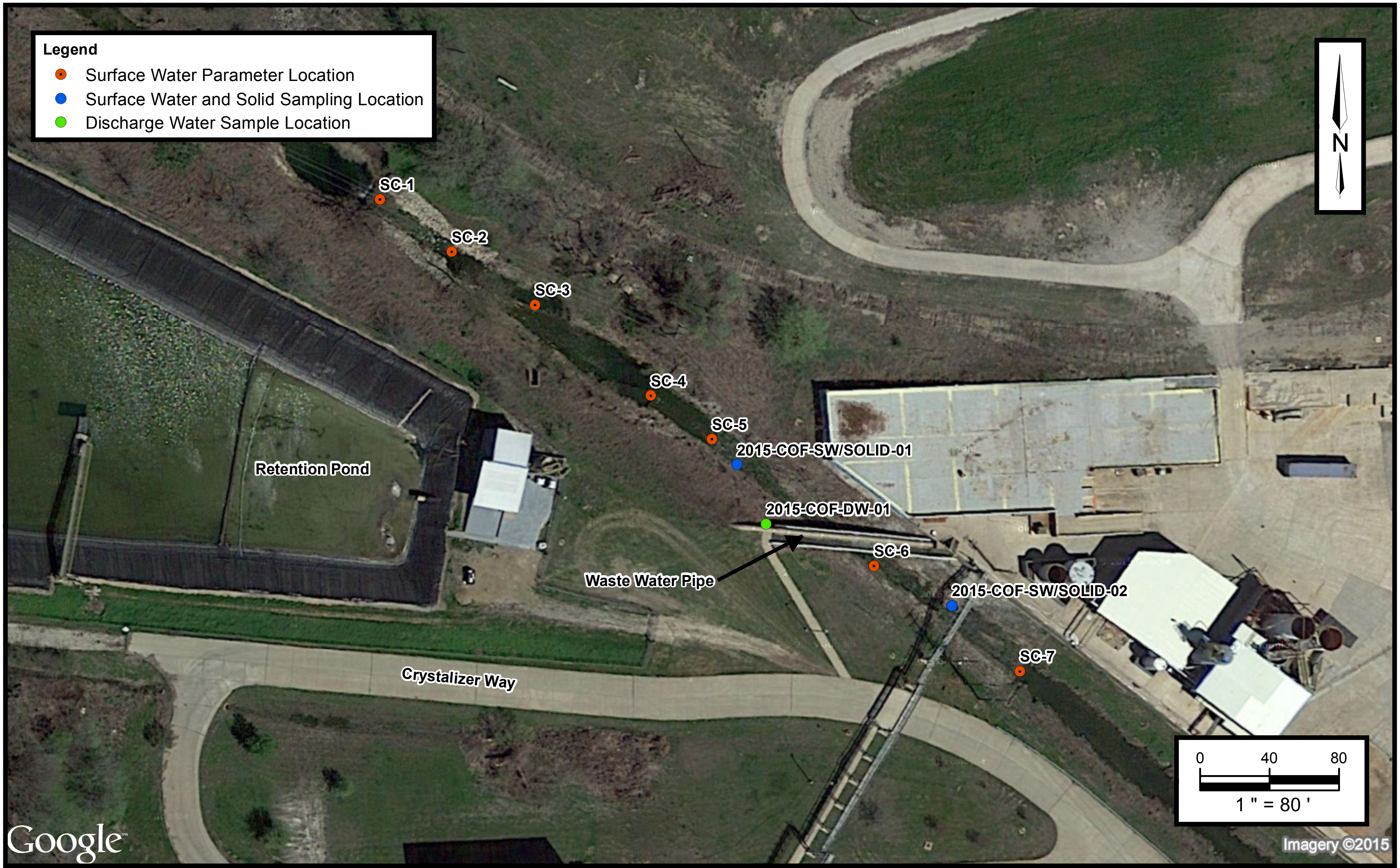
Prepared by:
Apex TITAN, Inc.
2351 W. Northwest Highway, Suite 3321
Dallas, Texas 75220
(214) 350-5469
www.apexcos.com

July 2, 2015
Project 7020112C079

Figure 1

Stewart Creek FOP
Surface Water, Solids and Discharge Water Sample Location Map

DRAFT



City of Frisco
Surface Water, Solids and
Discharge Water Sampling
Stewart Creek FOP
Frisco, Texas

Project No. 7020112C079

Apex TITAN, Inc.
2351 W. Northwest Highway
Dallas, Texas 75220
Phone: (214) 350-5469
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1

Stewart Creek FOP Surface Water, Solids and Discharge Water Sample Location Map

Aerial Photograph March 2015

C:\Users\jsimpson\Desktop\7020112C079\Figure 1.mxd 6/24/2015

Summary Tables

Table 1 – Solid Sample Analytical Results
Table 2 – Surface Water Analytical Results
Table 3 – Surface Water Quality Parameters

Table 1
Solid Sample Analytical Results
Stewart Creek - Former Operating Plant
Frisco, Texas

Sample ID	Date	pH (Unitless)	Percent Solids (%)	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Calcium mg/kg	Chromium mg/kg	Lead mg/kg	Magnesium mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Sulfate mg/kg
TRRP Ecological Benchmarks for Sediment		NA	NA	2	*9.79*	NE	NE	*0.99*	NE	43.4	*35.8*	NE	0.18	22.7	NE	1	NA
TRRP Ecological Protective Concentration Level		NA	NA	13.5*	*21.4**	NE	NE	*2.985**	NE	77.2*	*81.9**	NE	0.62*	35.65*	NE	1.6*	NA
TCEQ Second Effects Levels for Sediment		NA	NA	25	*33*	NE	NE	*4.98*	NE	111	*128*	NE	1.06	48.6	NE	2.2	NA
TRRP Human Health Sediment Protective Concentration Levels		NA	NA	83	*24*	23,000	27	*1,100*	NE	36,000	*500* (250)^1	NE	34	1,400	2,700*	350	NE
Maximum Concentrations Previously Detected in Sediment Near the Former Operating Plant (Source: Exide APAR (2014) and Interim Action Report (August 2014))		NA	NA	NA	57.9	NA	NA	4.53 J	NA	NA	19,100	NA	NA	NA	NA	NA	NA
TRRP Tier 1 Residential $^{GW}Soil_{Ing}$ PCL (30-Acre Source Area)		NA	NA	*2.7***	*3.1*	*220*	*0.92*	*30***	NE	*1,200***	*280*	NE	*0.0039*	*79***	*1.6*	0.24	NE
TRRP Tier 1 Residential $^{Total}Soil_{Comb}$ PCL		NA	NA	*15*	*24*	*8,100*	*38*	*52*	NE	*27,000*	*500*	NE	*2.1*	*840*	*310*	*97*	NE
Site-Specific Background		NA	NA	1	*15.9***	NE	NE	NE	NE	NE	31.5**	NE	NE	NE	NE	NE	NE
Frisco Background Concentrations		NA	NA	NE	8.6	161	NE	0.4	NE	32.7	13.7	NE	0.019	NE	2.1**	0.44**	NE
TRRP Texas-Specific Background		NA	NA	1	5.9	300**	1.5**	NE	NE	30	15	NE	0.04**	10	0.3	NE	NE
Maximum Concentrations Previously Detected In Soil		NA	NA	102	115	131	0.806	984	NA	22.4	95,000	NA	0.013 J	12.4	29.2	NA	8,710
Total Metals and Sulfate																	
2015-COF-SOLID-01 (0-0.25)	6/8/2015	8.70	57.8	0.085 J	5.0	224	<0.024	1.7	342,000	0.54	**1,030**	2,130	<0.021	2.6	0.66 J	<0.031	75.2
2015-COF-SOLID-02 (0-0.25)	6/8/2015	10.03	54.7	0.12 J	10.1	226	<0.025	0.23 J	335,000	0.36 J	**870**	3,780	<0.021	2.2	1.1	<0.033	311

Toxicity Characteristic Leaching Procedure (TCLP)

Sample ID	Date	pH (Unitless)	Percent Solids (%)	Antimony (mg/l)	Arsenic (mg/l)	Barium (mg/l)	Beryllium (mg/l)	Cadmium (mg/l)	Calcium (mg/l)	Chromium (mg/l)	Lead (mg/l)	Magnesium (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Selenium (mg/l)	Silver (mg/l)	Sulfate (mg/l)
TCLP Regulatory Levels		< 2 or > 12.5	NA	NE	5.0	100.0	NE	1.0	NE	5.0	5.0	NE	0.2	NE	1.0	5.0	NE
TCEQ Class 1 Toxic Constituents' Maximum Leachable Concentrations		NE		1	1.8	100.0	0.08	0.5	NE	5.0	1.5	NE	0.2	70	1.0	5.0	NE
2015-COF-SOLID-01 (0-0.25)	6/8/2015	8.70	57.8	<0.0051	0.0074 J	0.48 J	<0.00080	0.0070 J	N/A	0.0049 J	0.14	N/A	<0.000050	0.020 J	<0.0049	<0.0012	N/A
2015-COF-SOLID-02 (0-0.25)	6/8/2015	10.03	54.7	<0.0051	<0.0050	0.46 J	<0.00080	0.0011 J	N/A	<0.0014	0.23	N/A	<0.000050	0.013 J	<0.0049	<0.0012	N/A

DRAFT

NE - Not Established

N/A - Not Analyzed

NA - Not Applicable

mg/Kg - miligrams per kilogram

* Applicable Sediment PCL

** Applicable Soil PCL

Italicized RBEL or PCL - RBEL or PCL listed in Table 7A of Exide's APAR dated May 2014

Maximum concentrations based on Exide's APAR dated May 2014

🟦	Bold and shading indicates a concentration above the TRRP Ecological Benchmark for Sediment.
🟥	Bold and shading indicates a concentration above the TRRP Critical Protective Concentration Level.
🟩	Bold and shading indicates a concentration above the TCEQ Second Effects Level for sediment.
🟧	Bold and shading indicates a concentration above the TRRP Human Health Sediment Protective Concentration Levels.
▨	Italicized and gray shading indicates a concentration detected above a Critical soil PCL (if evaluated as a soil sample).

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

^{1} - Based on an agreement between the City of Frisco and Exide Technologies, Inc., the Tier 1 Human Health PCL was established as 250 mg/Kg.

Benchmarks obtained from the TCEQ guidance document Conducting Ecological Risk Assessments at Remediation Sites in Texas RG-263 (Revised Draft), dated January 2014.

Site-Specific Background concentrations obtained from a letter to TCEQ titled *Revised Site-specific Background Soil Concentration Evaluation* , dated May 30, 2013, prepared by PBW, L.L.C.

Frisco Background Concentrations obtained from the *Background Study* report prepared by Southwest Geoscience, dated March 4, 2014

Table 2
Surface Water Analytical Results
Stewart Creek - Former Operating Plant
Frisco, Texas

Sample ID	Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Lead	Magnesium	Mercury	Nickel	Selenium	Silver	Sulfate
		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Acute Aquatic Life RBEL		**NE**	***0.340***^{1}	**NE**	**NE**	***0.00908***^{2}	**NE**	**NE**	***0.0688***^{2}	**NE**	**0.0024**^{1}	**0.00079**$^{2+}$	**0.020**^{1}	**0.0008**^{1*}	**NE**
Chronic Aquatic Life RBEL		**NE**	***0.150***^{1}	**NE**	**NE**	***0.000256***^{2*}	**NE**	**NE**	***0.00268***^{2*}	**NE**	**0.0013**^{1*}	**0.00060**$^{2+*}$	**0.005**^{1*}	**NE**	**NE**
Human Health RBEL Values (Fish Only)		**10.71**^{3}	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	***0.0383***^{3}	**NE**	**0.000122**^{3}	**11.4**^{3}	**NE**	**NE**	**NE**
TRRP Human Health Contact Recreation PCL		**0.199**^{4*}	***0.0285***^{4*}	**64.9**^{4*}	**0.0943**^{4*}	***0.149***^{4}	**NE**	**126**^{4}	***0.015***^{5}	**NE**	**0.0973**^{5}	**11.3**^{5}	**4.13**^{4}	**1.57**^{4}	**NE**
Maximum Concentrations Previously Detected (Source: Exide APAR (2014))		**NA**	**0.00393**	**NA**	**NA**	**0.002 J**	**NA**	**NA**	**0.0046 J**	**NA**	**NA**	**NA**	**NA**	**NA**	**127**
Dissolved Metals															
2015-COF-DW-01	6/8/2015	0.0274	0.0097	0.0128	<0.00026	**0.0043**	9.33	0.0020	**0.0487**	1.76	<0.000050	**0.0022 J**	0.0069	<0.00020	N/A
2015-COF-SW-01	6/8/2015	<0.00072	0.00095 J	0.0936	<0.00026	<0.00027	142	0.00065 J	<0.00048	5.84	<0.000050	**0.0014 J**	0.0014 J	<0.00020	N/A
2015-COF-SW-02	6/8/2015	<0.00072	0.0014 J	0.0870	<0.00026	<0.00027	128	0.00042 J	0.00220	5.52	<0.000050	**0.0014 J**	0.0014 J	<0.00020	N/A
Total Metals and Sulfate															
2015-COF-DW-01	6/8/2015	0.0213	0.0158	0.115	0.00051 J	**0.0228**	24.1	0.0253	**0.765**	9.51	<0.000050	**0.0179**	0.0068	<0.00020	856
2015-COF-SW-01	6/8/2015	<0.00072	0.0010 J	0.0949	<0.00026	<0.00027	143	0.00036 J	0.002	5.79	<0.000050	**0.0014 J**	0.0011 J	<0.00020	1190
2015-COF-SW-02	6/8/2015	<0.00072	0.0014 J	0.0960	<0.00026	<0.00027	143	0.00040 J	0.0123	5.83	<0.000050	**0.0015 J**	0.0014 J	<0.00020	1190

N/A - Not Analyzed

NA - Not Applicable

NE - Not Established

mg/L - miligrams per liter

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

* Applicable Surface Water PCL

Italicized RBEL or PCL - RBEL or PCL listed in Table 6A of Exide's APAR dated May 2014

Maximum Concentrations Detected based on Exide's APAR dated May 2014

🟦	Bold and shading indicates a concentration above the Acute Aquatic Life RBEL for Surface Water.
🟥	Bold and shading indicates a concentration above the TRRP Critical Protective Concentration Level (Chronic Aquatic Life RBEL).
🟩	Bold and shading indicates a concentration above the TCEQ Human Health RBEL values.
🟧	Bold and shading indicates a concentration above the TRRP Human Health Surface Water Protective Concentration Levels.
▨	Gray shading indicates dissolved metals samples.

[1] - TCEQ Aquatic Life RBELs - Texas Surface Water Quality Standards, 2014

[2] - Calculated RBEL (Assuming a Hardness of 106 mg/L) - Texas Surface Water Quality Standards, 2014

[2+] - Calculated RBEL by Apex (Assuming a Hardness of 106 mg/L) - Texas Surface Water Quality Standards, 2014

[3] - TCEQ Human Health RBELs, 2014 (Assuming a Second Order Perennial Stream)

[4] - TCEQ Tier 1 Contact Recreation Water PCLs, March 2006

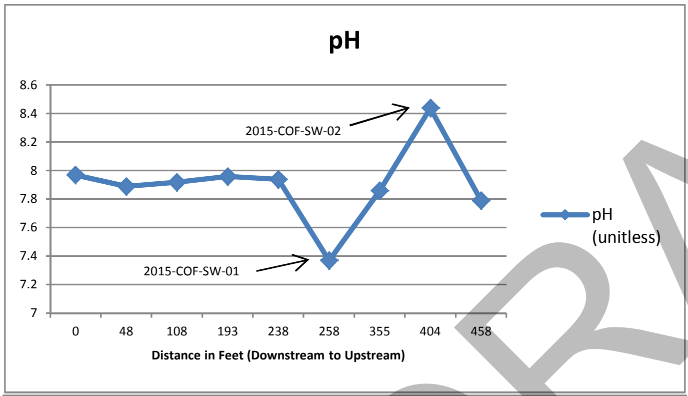
[5] - Contact Recreation PCL Not Established - Drinking Water Standard Utilized

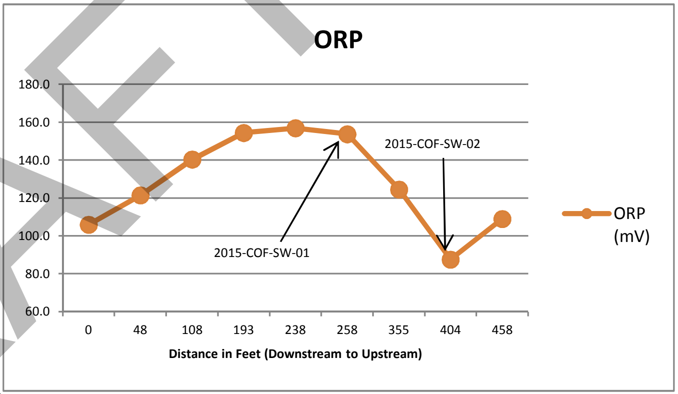
[6] - Based on Maximum Contaminant Levels (MCLs) specified in 30 TAC §290 (relating to Public Drinking Water)

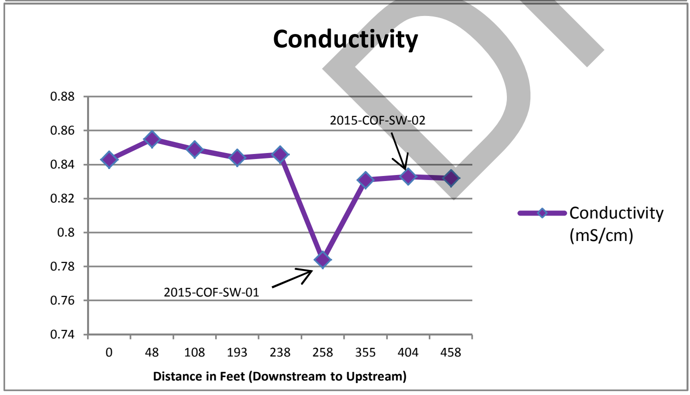
DRAFT

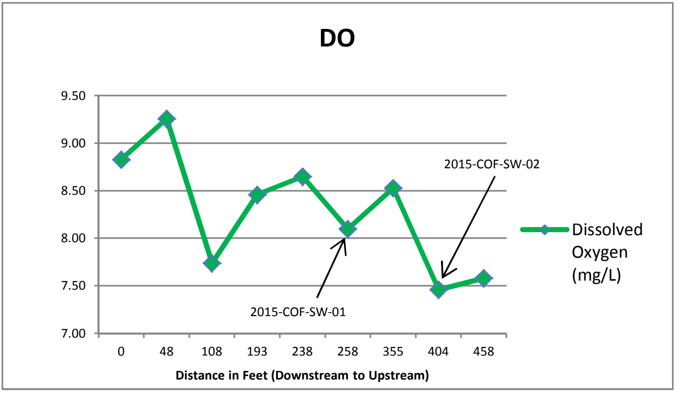
Table 3
Surface Water Quality Parameters
Stewart Creek - Former Operating Plant
Frisco, Texas

Location	Date	Depth (Feet)	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (unitless)	ORP (mV)	Distance (Downstream to Upstream in Feet)
SC-1	6/8/2015	0.5	28.03	0.843	8.83	7.97	106.0	0
SC-2	6/8/2015	0.33	27.92	0.855	9.26	7.89	121.5	48
SC-3	6/8/2015	1.5	27.84	0.849	7.74	7.92	140.4	108
SC-4	6/8/2015	0.5	27.41	0.844	8.46	7.96	154.5	193
SC-5	6/8/2015	0.67	27.29	0.846	8.65	7.94	157.0	238
2015-COF-SW-01	6/8/2015	0.33	27.10	0.784	8.10	7.37	153.8	258
SC-6	6/8/2015	0.33	26.78	0.831	8.53	7.86	124.6	355
2015-COF-SW-02	6/8/2015	0.5	26.68	0.833	7.46	8.44	87.7	404
SC-7	6/8/2015	1	26.49	0.832	7.58	7.79	109.1	458
Discharge Water From Waste Water Pipe								
2015-COF-DW-01	6/8/2015	N/A	27.93	0.520	6.95	11.00	228.7	N/A









DRAFT

Surface Water and Discharge Water Analytical Results

Accutest Laboratories Report
Dated June 23, 2015

Accutest Job Number: TC68547

Gulf Coast
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06/23/15

Technical Report for

APEX TITAN, Inc.

7020112C079 / Stewart Creek

7020112C079

Accutest Job Number: TC68547

Sampling Date: 06/08/15

Report to:

APEX TITAN, Inc.
2351 W. Northwest Hwy Suite 3321
Dallas, TX 75220
JMinter@apexcos.com

ATTN: Jason Minter

Total number of pages in report: **40**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Sylvia Garza 713-271-4700

Certifications: TX (T104704220-15-21, 1M104704220-15-2) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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Table of Contents

-1-

Sample Summary

APEX TITAN, Inc.

Job No: TC68547

7020112C079 / Stewart Creek
Project No: 7020112C079

Sample Number	**Collected Date**	**Time**	**By**	**Received**	**Matrix Code**	**Type**	**Client Sample ID**
TC68547-1	06/08/15	18:53		06/10/15	AQ	Water	2015-COF-SW-01
TC68547-1F	06/08/15	18:53		06/10/15	AQ	Water Filtered	2015-COF-SW-01
TC68547-2	06/08/15	19:55		06/10/15	AQ	Water	2015-COF-SW-02
TC68547-2F	06/08/15	19:55		06/10/15	AQ	Water Filtered	2015-COF-SW-02
TC68547-3	06/08/15	20:50		06/10/15	AQ	Water	2015-COF-DW-01
TC68547-3F	06/08/15	20:50		06/10/15	AQ	Water Filtered	2015-COF-DW-01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: APEX TITAN, Inc. **Job No** TC68547

Site: 7020112C079 / Stewart Creek **Report Date** 6/23/2015 9:39:42 AM

3 Samples were collected on 06/08/2015 and received intact at Accutest on 06/10/2015 and properly preserved in 1 cooler at 0.8 Deg C. These Samples received an Accutest job number of TC68547. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Metals By Method SW846 6020A

Matrix AQ **Batch ID:** MP26096

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68547-1MS, TC68547-1MSD, TC68547-1SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Chromium, Lead, Nickel, Selenium are outside control limits for sample MP26096-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- RPD(s) for Serial Dilution for Barium, Magnesium are outside control limits for sample MP26096-SD1. Serial dilution indicates possible matrix interference.

Metals By Method SW846 7470A

Matrix AQ **Batch ID:** MP26097

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68547-1MS, TC68547-1MSD were used as the QC samples for metals.

Wet Chemistry By Method EPA 300

Matrix AQ **Batch ID:** GP32525

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68707-10DUP, TC68707-10MS were used as the QC samples for Sulfate.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: TC68547
Account: APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek
Collected: 06/08/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC68547-1	**2015-COF-SW-01**					
Arsenic		0.0010 J	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.0949	0.0020	0.00019	mg/l	SW846 6020A
Calcium		143	0.50	0.019	mg/l	SW846 6020A
Chromium		0.00036 J	0.0020	0.00013	mg/l	SW846 6020A
Lead		0.0020	0.0020	0.00048	mg/l	SW846 6020A
Magnesium		5.79	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0014 J	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0011 J	0.0040	0.00054	mg/l	SW846 6020A
Sulfate		1190	25	13	mg/l	EPA 300
TC68547-1F	**2015-COF-SW-01**					
Arsenic		0.00095 J	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.0936	0.0020	0.00019	mg/l	SW846 6020A
Calcium		142	0.50	0.019	mg/l	SW846 6020A
Chromium		0.00065 J	0.0020	0.00013	mg/l	SW846 6020A
Magnesium		5.84	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0014 J	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0014 J	0.0040	0.00054	mg/l	SW846 6020A
TC68547-2	**2015-COF-SW-02**					
Arsenic		0.0014 J	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.0960	0.0020	0.00019	mg/l	SW846 6020A
Calcium		143	0.50	0.019	mg/l	SW846 6020A
Chromium		0.00040 J	0.0020	0.00013	mg/l	SW846 6020A
Lead		0.0123	0.0020	0.00048	mg/l	SW846 6020A
Magnesium		5.83	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0015 J	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0014 J	0.0040	0.00054	mg/l	SW846 6020A
Sulfate		1190	25	13	mg/l	EPA 300
TC68547-2F	**2015-COF-SW-02**					
Arsenic		0.0014 J	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.0870	0.0020	0.00019	mg/l	SW846 6020A
Calcium		128	0.50	0.019	mg/l	SW846 6020A
Chromium		0.00042 J	0.0020	0.00013	mg/l	SW846 6020A
Lead		0.0022	0.0020	0.00048	mg/l	SW846 6020A
Magnesium		5.52	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0014 J	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0014 J	0.0040	0.00054	mg/l	SW846 6020A

Summary of Hits

Job Number: TC68547
Account: APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek
Collected: 06/08/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC68547-3	**2015-COF-DW-01**					
Antimony		0.0213	0.0040	0.00072	mg/l	SW846 6020A
Arsenic		0.0158	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.115	0.0020	0.00019	mg/l	SW846 6020A
Beryllium		0.00051 J	0.0020	0.00026	mg/l	SW846 6020A
Cadmium		0.0228	0.0020	0.00027	mg/l	SW846 6020A
Calcium		24.1	0.50	0.019	mg/l	SW846 6020A
Chromium		0.0253	0.0020	0.00013	mg/l	SW846 6020A
Lead		0.765	0.0020	0.00048	mg/l	SW846 6020A
Magnesium		9.51	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0179	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0068	0.0040	0.00054	mg/l	SW846 6020A
Sulfate		856	25	13	mg/l	EPA 300
TC68547-3F	**2015-COF-DW-01**					
Antimony		0.0274	0.0040	0.00072	mg/l	SW846 6020A
Arsenic		0.0097	0.0040	0.00054	mg/l	SW846 6020A
Barium		0.0128	0.0020	0.00019	mg/l	SW846 6020A
Cadmium		0.0043	0.0020	0.00027	mg/l	SW846 6020A
Calcium		9.33	0.50	0.019	mg/l	SW846 6020A
Chromium		0.0020	0.0020	0.00013	mg/l	SW846 6020A
Lead		0.0487	0.0020	0.00048	mg/l	SW846 6020A
Magnesium		1.76	0.50	0.014	mg/l	SW846 6020A
Nickel		0.0022 J	0.0040	0.00010	mg/l	SW846 6020A
Selenium		0.0069	0.0040	0.00054	mg/l	SW846 6020A

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Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 2015-COF-SW-01
Lab Sample ID: TC68547-1
Matrix: AQ - Water
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

Total Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.00072 U	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.0010 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.0949	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00026 U	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.00027 U	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	143	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.00036 J	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.0020	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	5.79	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0014 J	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0011 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SW-01
Lab Sample ID: TC68547-1
Matrix: AQ - Water
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Sulfate	1190	25	13	mg/l	50	06/18/15 15:34	ES	EPA 300

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SW-01
Lab Sample ID: TC68547-1F
Matrix: AQ - Water Filtered
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

Dissolved Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.00072 U	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.00095 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.0936	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00026 U	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.00027 U	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	142	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.00065 J	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.00048 U	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	5.84	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0014 J	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0014 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID:	2015-COF-SW-02		
Lab Sample ID:	TC68547-2	**Date Sampled:**	06/08/15
Matrix:	AQ - Water	**Date Received:**	06/10/15
		Percent Solids:	n/a
Project:	7020112C079 / Stewart Creek		

Total Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.00072 U	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.0014 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.0960	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00026 U	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.00027 U	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	143	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.00040 J	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.0123	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	5.83	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0015 J	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0014 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SW-02
Lab Sample ID: TC68547-2
Matrix: AQ - Water
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Sulfate	1190	25	13	mg/l	50	06/18/15 15:51	ES	EPA 300

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SW-02
Lab Sample ID: TC68547-2F
Matrix: AQ - Water Filtered
Project: 7020112C079 / Stewart Creek

Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.00072 U	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.0014 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.0870	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00026 U	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.00027 U	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	128	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.00042 J	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.0022	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	5.52	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0014 J	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0014 J	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-DW-01
Lab Sample ID: TC68547-3
Matrix: AQ - Water
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

Total Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.0213	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.0158	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.115	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00051 J	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.0228	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	24.1	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.0253	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.765	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	9.51	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0179	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0068	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-DW-01
Lab Sample ID: TC68547-3
Matrix: AQ - Water
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Sulfate	856	25	13	mg/l	50	06/18/15 16:30	ES	EPA 300

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-DW-01
Lab Sample ID: TC68547-3F
Matrix: AQ - Water Filtered
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: n/a
Project: 7020112C079 / Stewart Creek

Dissolved Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.0274	0.0040	0.00072	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Arsenic	0.0097	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Barium	0.0128	0.0020	0.00019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Beryllium	0.00026 U	0.0020	0.00026	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Cadmium	0.0043	0.0020	0.00027	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Calcium	9.33	0.50	0.019	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Chromium	0.0020	0.0020	0.00013	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Lead	0.0487	0.0020	0.00048	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Magnesium	1.76	0.50	0.014	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Mercury	0.000050 U	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]	SW846 7470A [4]
Nickel	0.0022 J	0.0040	0.00010	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Selenium	0.0069	0.0040	0.00054	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]
Silver	0.00020 U	0.0020	0.00020	mg/l	2	06/15/15	06/16/15	EG	SW846 6020A [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11105
(3) Prep QC Batch: MP26096
(4) Prep QC Batch: MP26097

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- LRC Form

~~TC68546~~

CHAIN OF CUSTODY RECORD

APEX

Office Location Dallas

Project Manager R. Simpson

Laboratory: Accutest

Address:

Contact:

Phone: 713-271-4700

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°):

1	2	3	4	5

Page 1 of 1

TC68547

Sampler's Name: Jason Minter

Sampler's Signature:

Proj. No. 70201112C079

Project Name: Stewart Creek

No/Type of Containers

ANALYSIS REQUESTED

	Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	Total TX11 metals + Ca, Mg SW 846 #6020/7470	Dissolved TX11 metals + Ca, Mg SW 846 #6020/7470	Sulfate ~~SW 846 #9056~~ JK EPA method 300							Lab Sample ID (Lab Use Only)
1	W	6-8-15	1853		X	2015-COF-SW-01	—						4	X	X	X							
2	W	6-8-15	1955		X	2015-COF-SW-02	—						4	X	X	X							
3	W	6-8-15	2050		X	2015-COF-DW-01	—						4	X	X	X							
	W					Temp Blank					1												

NFE JM 6-8-15

Turn around time ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6-8-15	1910	FedEx	6-8-15	1910
FedEx	6/10/15	0900	Bianca Henry	6/10/15	0900

NOTES: FedEx 6170 1279 6104

Matrix: WW - Wastewater W - Water S - Soil SD - Solid L - Liquid A - Air Bag C - Charcoal tube SL - sludge O - Oil
Container: VOA - 40 ml vial A/G - Amber / Or Glass 1 Liter 250 ml - Glass wide mouth P/O - Plastic or other

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: TC68547 **Client:** APEX **Project:** SEAWORTCREEK

Date / Time Received: 6/10/2015 **Delivery Method:** **Airbill #'s:** 617012796104

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (0.8/0.8);

Cooler Security	**Y**	**N**		**Y**	**N**
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	**Y**	**N**
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:		
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	**Y**	**N**	**N/A**	**WTB**	**STB**
1. Trip Blank present / cooler:	☐	☐	☑	☐	☐
2. Trip Blank listed on COC:	☐	☐	☑		
3. Samples preserved properly:	☑	☐			
4. VOCs headspace free:	☐	☐	☑		

Sample Integrity - Documentation	**Y**	**N**
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	**Y**	**N**
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	**Y**	**N**	**N/A**
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume recvd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Sample Receipt Log

Job #: TC68547 **Date / Time Received:** 6/10/2015 9:00:00 AM **Initials:** BH

Client: APEX

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TC68547-1	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-1	500ml	2	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-1	500ml	3	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8
1	TC68547-1	500ml	4	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8
1	TC68547-2	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-2	500ml	2	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-2	500ml	3	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8
1	TC68547-2	500ml	4	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8
1	TC68547-3	500ml	1	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-3	500ml	2	M3B	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68547-3	500ml	3	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8
1	TC68547-3	500ml	4	M3B	HNO3	pH < 2	IR-5	0.8	0	0.8

TC68547: Chain of Custody
Page 3 of 3

Appendix A Laboratory Data Package Cover Page

TC68547 This data package consists of

- ☐ This signature page, the laboratory review checklist, and the following reportable data:
- ☐ 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 5.13 or ISO/IEC 17025 Section 5.10
  - 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
  - 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
- ☐ 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 Report. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld.

Check, if applicable: This laboratory meets an exception under 30 TAC&25.6 and was last inspection by

[ ] [X] TCEQ or [ ] ________ on April 2011. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

<u>QA Manager</u>

Name (Printed)	Signature	Official Title (printed)	Date
Richard Rodriguez		Laboratory Director	6/23/2015

LABORATORY REVIEW CHECKLIST: REPORTABLE DATA

Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/23/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68547**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GP32525, MP26096, MP26097**

#[1]	A[2]	DESCRIPTION	YES	NO	NA[3]	NR[4]	ER #[5]
R1	**OI**	**CHAIN-OF-CUSTODY (C-O-C):**					
		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**	**Sample and quality control (QC) identification**					
		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**	**Test reports**					
		Were 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 TIC's reported?			X		
R4	**O**	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	**OI**	**Test reports/summary forms for blank samples**					
		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**	**Laboratory control samples (LCS):**					
		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 required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectablility 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**	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		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 the MS/MSD RPDs within laboratory QC limits?	X				
R8	**OI**	**Analytical duplicate data**					
		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**	**Method quantitation limits (MQLs):**					
		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	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?		X			**2**
R10	**OI**	**Other problems/anomalies**					
		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	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				**3**

Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/23/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68547**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GP32525, MP26096, MP26097**

#[1]	A[2]	DESCRIPTION	YES	NO	NA[3]	NR[4]	ER #[5]
S1	**OI**	**Initial calibration (ICAL)**					
		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**	**Initial and continuing calibration verification (ICCV AND CCV) and continuing**					
		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			**5**
S3	**O**	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	**O**	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	**OI**	**Raw data (NELAC Section 5.5.10)**					
		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**	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	**O**	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	**I**	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	**I**	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			**4**
S10	**OI**	**Method detection limit (MDL) studies**					
		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**	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	**OI**	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate source?	X				
S13	**OI**	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	**OI**	**Demonstration of analyst competency (DOC)**					
		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**	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documentated, verified, and validated, where applicable?	X				
S16	**OI**	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

LABORATORY REVIEW CHECKLIST (continued): Exception Reports

Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/23/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68547**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GP32525, MP26096, MP26097**

ER#[1]	**Description**
1	For reporting purposes, the MQL is defined in the report as the RL. The unadjusted MQL/RL is reported in the method blank. The SDL is defined in the report as the MDL.
2	For reporting purposes, the method blank represents the unadjusted MQL. The DCS is on file in the laboratory and is not included in the laboratory data package.
3	The laboratory is NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices, and methods associated with this laboratory data package for analytes that are listed in the Texas Fields of Accreditation.
4	All anomalies are discussed in the case narrative
5	See Metals CCB MDL check section of report.

1ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on

Gulf Coast ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- Metals CCB MDL Check

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26096
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/15/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	25	18		
Antimony	4.0	.048	.72	-0.79	<4.0
Arsenic	4.0	.12	.54	-0.10	<4.0
Barium	2.0	.026	.19	-0.66	<2.0
Beryllium	2.0	.04	.26	-0.37	<2.0
Boron	10	.73	.78		
Cadmium	2.0	.058	.27	-0.13	<2.0
Calcium	500	24	19	-15	<500
Chromium	2.0	.062	.13	-0.065	<2.0
Cobalt	4.0	.038	.11		
Copper	4.0	.09	.11		
Iron	100	32	14		
Lead	2.0	.05	.48	-0.31	<2.0
Lithium	2.0	.7	.66		
Magnesium	500	24	14	-7.1	<500
Manganese	2.0	.052	.45		
Molybdenum	2.0	.71	.56		
Nickel	4.0	.054	.1	-0.18	<4.0
Potassium	500	27	20		
Selenium	4.0	.98	.54	0.094	<4.0
Silver	2.0	.036	.2	-0.19	<2.0
Sodium	500	24	21		
Strontium	10	.068	.25		
Thallium	2.0	.1	.1		
Tin	10	.096	.35		
Titanium	10	.58	.56		
Vanadium	2.0	.068	.43		
Zinc	4.0	.084	.82		

Associated samples MP26096: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26096
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/15/15

Metal	TC68547-1 Original	MS	Spikelot MPTW11	% Rec	QC Limits
Aluminum					
Antimony	0.0	443	400	110.8	75-125
Arsenic	1.0	407	400	101.5	75-125
Barium	94.9	532	400	109.3	75-125
Beryllium	0.0	381	400	95.3	75-125
Boron					
Cadmium	0.0	403	400	100.8	75-125
Calcium	143000	195000	50000	104.0	75-125
Chromium	0.36	442	400	110.4	75-125
Cobalt					
Copper					
Iron					
Lead	2.0	395	400	98.3	75-125
Lithium					
Magnesium	5790	60700	50000	109.8	75-125
Manganese					
Molybdenum					
Nickel	1.4	398	400	99.2	75-125
Potassium					
Selenium	1.1	346	400	86.2	75-125
Silver	0.0	403	400	100.8	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP26096: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26096
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/15/15

Metal	TC68547-1 Original	MSD	Spikelot MPTW11	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	0.0	458	400	114.5	3.3	20
Arsenic	1.0	422	400	105.3	3.6	20
Barium	94.9	552	400	114.3	3.7	20
Beryllium	0.0	394	400	98.5	3.4	20
Boron						
Cadmium	0.0	406	400	101.5	0.7	20
Calcium	143000	198000	50000	110.0	1.5	20
Chromium	0.36	449	400	112.2	1.6	20
Cobalt						
Copper						
Iron						
Lead	2.0	400	400	99.5	1.3	20
Lithium						
Magnesium	5790	61300	50000	111.0	1.0	20
Manganese						
Molybdenum						
Nickel	1.4	401	400	99.9	0.8	20
Potassium						
Selenium	1.1	360	400	89.7	4.0	20
Silver	0.0	406	400	101.5	0.7	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP26096: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26096
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/15/15

Metal	BSP Result	Spikelot MPTW11	% Rec	QC Limits
Aluminum				
Antimony	433	400	108.3	80-120
Arsenic	402	400	100.5	80-120
Barium	436	400	109.0	80-120
Beryllium	393	400	98.3	80-120
Boron				
Cadmium	396	400	99.0	80-120
Calcium	50900	50000	101.8	80-120
Chromium	416	400	104.0	80-120
Cobalt				
Copper				
Iron				
Lead	394	400	98.5	80-120
Lithium				
Magnesium	52600	50000	105.2	80-120
Manganese				
Molybdenum				
Nickel	406	400	101.5	80-120
Potassium				
Selenium	366	400	91.5	80-120
Silver	412	400	103.0	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26096: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26096
Matrix Type: AQUEOUS

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/15/15

Metal	TC68547-1 Original	SDL 2:10	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	1.02	0.00	100.0(a)	0-10
Barium	94.9	82.3	13.3*(b)	0-10
Beryllium	0.00	0.00	NC	0-10
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	143000	131000	8.4	0-10
Chromium	0.364	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	1.97	0.420	78.6 (a)	0-10
Lithium				
Magnesium	5790	5100	12.0*(b)	0-10
Manganese				
Molybdenum				
Nickel	1.35	3.60	165.8(a)	0-10
Potassium				
Selenium	1.15	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26096: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26097
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/15/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.05	.05	-0.045	<0.20

Associated samples MP26097: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26097
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/15/15

Metal	TC68547-1 Original	MS	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	0.0	3.1	3	103.3	75-125

Associated samples MP26097: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26097
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/15/15

Metal	TC68547-1 Original	MSD	Spikelot HGTXAQ40	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.8	3	93.3	10.2	20

Associated samples MP26097: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26097
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 06/15/15

Metal	BSP Result	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP26097: TC68547-1, TC68547-2, TC68547-3, TC68547-1F, TC68547-2F, TC68547-3F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Metals CCB MDL Check

Job Number: TC68547
Account: APEXTTXD APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

The following elements are braketed by CCB's at or above the MDL.

Sample	Element	Run ID	Time	MDL	Units	CCB Before		CCB After	
TC68547-1	Mercury	MA11098	13:59	.050	ug/l	CCB1	-0.069	CCB2	-0.063
TC68547-2	Mercury	MA11098	14:27	.050	ug/l	CCB2	-0.063	CCB3	-0.061
TC68547-3	Mercury	MA11098	14:29	.050	ug/l	CCB2	-0.063	CCB3	-0.061
TC68547-1F	Mercury	MA11098	14:30	.050	ug/l	CCB2	-0.063	CCB3	-0.061
TC68547-2F	Mercury	MA11098	14:32	.050	ug/l	CCB2	-0.063	CCB3	-0.061
TC68547-3F	Mercury	MA11098	14:34	.050	ug/l	CCB2	-0.063	CCB3	-0.061
TC68547-1	Antimony	MA11105	19:36	.36	ug/l	CCB1	-0.44	CCB2	-0.41
TC68547-2	Antimony	MA11105	20:39	.36	ug/l	CCB2	-0.41	CCB3	-0.44
TC68547-3	Antimony	MA11105	20:52	.36	ug/l	CCB2	-0.41	CCB3	-0.44
TC68547-1F	Antimony	MA11105	21:17	.36	ug/l	CCB3	-0.44	CCB4	-0.45
TC68547-2F	Antimony	MA11105	21:29	.36	ug/l	CCB3	-0.44	CCB4	-0.45
TC68547-3F	Antimony	MA11105	21:42	.36	ug/l	CCB3	-0.44	CCB4	-0.45
TC68547-1	Barium	MA11105	19:36	.093	ug/l	CCB1	-0.34	CCB2	-0.34
TC68547-2	Barium	MA11105	20:39	.093	ug/l	CCB2	-0.34	CCB3	-0.34
TC68547-3	Barium	MA11105	20:52	.093	ug/l	CCB2	-0.34	CCB3	-0.34
TC68547-1F	Barium	MA11105	21:17	.093	ug/l	CCB3	-0.34	CCB4	-0.34
TC68547-2F	Barium	MA11105	21:29	.093	ug/l	CCB3	-0.34	CCB4	-0.34
TC68547-3F	Barium	MA11105	21:42	.093	ug/l	CCB3	-0.34	CCB4	-0.34
TC68547-1	Beryllium	MA11105	19:36	.13	ug/l	CCB1	-0.18	CCB2	-0.18
TC68547-2	Beryllium	MA11105	20:39	.13	ug/l	CCB2	-0.18	CCB3	-0.18
TC68547-3	Beryllium	MA11105	20:52	.13	ug/l	CCB2	-0.18	CCB3	-0.18
TC68547-1F	Beryllium	MA11105	21:17	.13	ug/l	CCB3	-0.18	CCB4	-0.18
TC68547-2F	Beryllium	MA11105	21:29	.13	ug/l	CCB3	-0.18	CCB4	-0.18
TC68547-3F	Beryllium	MA11105	21:42	.13	ug/l	CCB3	-0.18	CCB4	-0.18
TC68547-1	Calcium	MA11105	19:36	9.3	ug/l	CCB1	-20	CCB2	-21
TC68547-2	Calcium	MA11105	20:39	9.3	ug/l	CCB2	-21	CCB3	-21
TC68547-3	Calcium	MA11105	20:52	9.3	ug/l	CCB2	-21	CCB3	-21
TC68547-1F	Calcium	MA11105	21:17	9.3	ug/l	CCB3	-21	CCB4	-22
TC68547-2F	Calcium	MA11105	21:29	9.3	ug/l	CCB3	-21	CCB4	-22
TC68547-3F	Calcium	MA11105	21:42	9.3	ug/l	CCB3	-21	CCB4	-22
TC68547-1	Nickel	MA11105	19:36	.050	ug/l	CCB1	-0.10	CCB2	-0.098
TC68547-2	Nickel	MA11105	20:39	.050	ug/l	CCB2	-0.098	CCB3	-0.10
TC68547-3	Nickel	MA11105	20:52	.050	ug/l	CCB2	-0.098	CCB3	-0.10
TC68547-1F	Nickel	MA11105	21:17	.050	ug/l	CCB3	-0.10	CCB4	-0.10
TC68547-2F	Nickel	MA11105	21:29	.050	ug/l	CCB3	-0.10	CCB4	-0.10
TC68547-3F	Nickel	MA11105	21:42	.050	ug/l	CCB3	-0.10	CCB4	-0.10

Calibration blank validation to the MDL is not a method requirement, but is included for information purposes only.

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- General Chemistry CCB MDL Check

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP32525/GN66488	0.50	0.0	mg/l	10	10.1	101.0	90-110%
Sulfate	GP32525/GN66488	0.50	0.0	mg/l	10	10.8	108.0	90-110%

Associated Samples:
Batch GP32525: TC68547-1, TC68547-2, TC68547-3
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP32525/GN66488	TC68707-10	mg/l	51.8	51.9	0.2	0-20%
Sulfate	GP32525/GN66488	TC68707-10	mg/l	33.6	33.5	0.3	0-20%

Associated Samples:
Batch GP32525: TC68547-1, TC68547-2, TC68547-3
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68547
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP32525/GN66488	TC68707-10	mg/l	51.8	50	103	102.4	80-120%
Sulfate	GP32525/GN66488	TC68707-10	mg/l	33.6	50	83.4	99.6	80-120%

Associated Samples:
Batch GP32525: TC68547-1, TC68547-2, TC68547-3
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

General Chemistry CCB MDL Check

Job Number: TC68547
Account: APEXTTXD APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

The following parameters are braketed by CCB's at or above the MDL.

Sample	Parameter	Run ID	Time	MDL	Units	CCB Before	CCB After

No CCB's found at or above MDL.

Calibration blank validation to the MDL is not a method requirement, but is included for information purposes only.

Solid Sample Analytical Results

Accutest Laboratories Report
Dated June 23, 2015

Accutest Job Number: TC68548

e-Hardcopy 2.0
Automated Report

Gulf Coast
ACCUTEST
LABORATORIES

06/23/15

Technical Report for

APEX TITAN, Inc.

7020112C079 / Stewart Creek

7020112C079

Accutest Job Number: TC68548

Sampling Date: 06/08/15

Report to:

APEX TITAN, Inc.
2351 W. Northwest Hwy Suite 3321
Dallas, TX 75220
JMinter@apexcos.com

ATTN: Jason Minter

Total number of pages in report: **47**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Richard Rodriguez
Laboratory Director

Client Service contact: Sylvia Garza 713-271-4700

Certifications: TX (T104704220-15-21, 1M104704220-15-2) AR (14-016-0) AZ (AZ0769) FL (E87628) KS (E-10366) LA (85695/04004) NJ (TX010) OK (2014-172) VA (7654)

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Table of Contents

-1-

Sample Summary

APEX TITAN, Inc.

Job No: TC68548

7020112C079 / Stewart Creek
Project No: 7020112C079

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
TC68548-1	06/08/15	19:18		06/10/15	SO	Solid	2015-COF-SOLID-01 0-0.25
TC68548-1A	06/08/15	19:18		06/10/15	SO	Solid	2015-COF-SOLID-01 0-0.25
TC68548-2	06/08/15	20:15		06/10/15	SO	Solid	2015-COF-SOLID-02 0-0.25
TC68548-2A	06/08/15	20:15		06/10/15	SO	Solid	2015-COF-SOLID-02 0-0.25

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	APEX TITAN, Inc.	**Job No**	TC68548
Site:	7020112C079 / Stewart Creek	**Report Date**	6/22/2015 4:55:39 PM

2 Samples were collected on 06/08/2015 and received intact at Accutest on 06/10/2015 and properly preserved in 1 cooler at 0.8 Deg C. These Samples received an Accutest job number of TC68548. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Metals By Method SW846 6010B

Matrix LEACHATE **Batch ID:** MP26094

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68548-1AMS, TC68548-1AMSD, TC68548-1ASDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Chromium are outside control limits for sample MP26094-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 6020A

Matrix SO **Batch ID:** MP26109

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC67604-12MSD, TC67604-12MS, TC67604-12SDL were used as the QC samples for metals.
- Matrix Spike Recovery(s) for Lead, Selenium are outside control limits. Spike recovery indicates possible matrix interference or sample non-homogeneity.
- Matrix Spike Duplicate Recovery(s) for Chromium, Lead, Selenium, Antimony are outside control limits. High RPD due to possible sample nonhomogeneity or matrix interference.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Calcium, Barium, Arsenic are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- RPD(s) for MSD for Antimony, Arsenic are outside control limits for sample MP26109-S2. High RPD due to possible sample nonhomogeneity or matrix interference.
- RPD(s) for Serial Dilution for Selenium are outside control limits for sample MP26109-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- RPD(s) for Serial Dilution for Arsenic, Beryllium, Cadmium, Chromium, Calcium, Silver are outside control limits for sample MP26109-SD1. Serial dilution indicates possible matrix interference.
- TC68548-2 for Chromium: Elevated reporting limit due to dilution required for matrix interference.
- TC68548-2 for Cadmium: Elevated reporting limit due to dilution required for matrix interference.
- TC68548-2 for Nickel: Elevated reporting limit due to dilution required for matrix interference.

Metals By Method SW846 7470A

Matrix LEACHATE	**Batch ID:** MP26101

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68548-1AMS, TC68548-1AMSD were used as the QC samples for metals.

Metals By Method SW846 7471A

Matrix SO	**Batch ID:** MP26111

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68645-1MS, TC68645-1MSD were used as the QC samples for metals.

Wet Chemistry By Method EPA 300

Matrix SO	**Batch ID:** GP32496

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC68635-2DUP, TC68635-2MS were used as the QC samples for Sulfate.
- Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Wet Chemistry By Method SM 2540 G

Matrix SO	**Batch ID:** GN66305

- Sample(s) TC68548-1DUP were used as the QC samples for Solids, Percent.

Wet Chemistry By Method SW846 9045C

Matrix SO	**Batch ID:** GN66306

- Sample(s) TC68548-1DUP were used as the QC samples for pH.
- TC68548-2 for pH: temp. 22.1 c
- TC68548-1 for pH: temp. 22.0 c

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: TC68548
Account: APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek
Collected: 06/08/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method
TC68548-1	**2015-COF-SOLID-01 0-0.25**					
Antimony		0.085 J	0.89	0.032	mg/kg	SW846 6020A
Arsenic		5.0	0.89	0.033	mg/kg	SW846 6020A
Barium		224	0.44	0.14	mg/kg	SW846 6020A
Cadmium		1.7	0.44	0.038	mg/kg	SW846 6020A
Calcium		342000	1100	49	mg/kg	SW846 6020A
Chromium		0.54	0.44	0.068	mg/kg	SW846 6020A
Lead		1030	1.8	0.25	mg/kg	SW846 6020A
Magnesium		2130	110	4.5	mg/kg	SW846 6020A
Nickel		2.6	0.89	0.058	mg/kg	SW846 6020A
Selenium		0.66 J	0.89	0.11	mg/kg	SW846 6020A
Sulfate		75.2	4.3	2.2	mg/kg	EPA 300
pH [a]		8.70			su	SW846 9045C
TC68548-1A	**2015-COF-SOLID-01 0-0.25**					
Arsenic		0.0074 J	0.050	0.0050	mg/l	SW846 6010B
Barium		0.48 J	5.0	0.017	mg/l	SW846 6010B
Cadmium		0.0070 J	0.020	0.00045	mg/l	SW846 6010B
Chromium		0.0049 J	0.050	0.0014	mg/l	SW846 6010B
Lead		0.14	0.025	0.0089	mg/l	SW846 6010B
Nickel		0.020 J	0.20	0.0070	mg/l	SW846 6010B
TC68548-2	**2015-COF-SOLID-02 0-0.25**					
Antimony		0.12 J	0.93	0.034	mg/kg	SW846 6020A
Arsenic		10.1	0.93	0.035	mg/kg	SW846 6020A
Barium		226	0.47	0.15	mg/kg	SW846 6020A
Cadmium [b]		0.23 J	0.93	0.081	mg/kg	SW846 6020A
Calcium		335000	1200	52	mg/kg	SW846 6020A
Chromium [b]		0.36 J	0.93	0.14	mg/kg	SW846 6020A
Lead		870	0.93	0.13	mg/kg	SW846 6020A
Magnesium		3780	230	9.6	mg/kg	SW846 6020A
Nickel [b]		2.2	1.9	0.12	mg/kg	SW846 6020A
Selenium		1.1	0.93	0.11	mg/kg	SW846 6020A
Sulfate		311	4.6	2.3	mg/kg	EPA 300
pH [c]		10.03			su	SW846 9045C
TC68548-2A	**2015-COF-SOLID-02 0-0.25**					
Barium		0.46 J	5.0	0.017	mg/l	SW846 6010B
Cadmium		0.0011 J	0.020	0.00045	mg/l	SW846 6010B
Lead		0.23	0.025	0.0089	mg/l	SW846 6010B
Nickel		0.013 J	0.20	0.0070	mg/l	SW846 6010B

Summary of Hits

Job Number: TC68548
Account: APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek
Collected: 06/08/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	MQL	SDL	Units	Method

(a) temp. 22.0 c
(b) Elevated reporting limit due to dilution required for matrix interference.
(c) temp. 22.1 c

Gulf Coast ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	2015-COF-SOLID-01 0-0.25		
Lab Sample ID:	TC68548-1	**Date Sampled:**	06/08/15
Matrix:	SO - Solid	**Date Received:**	06/10/15
		Percent Solids:	57.8
Project:	7020112C079 / Stewart Creek		

Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.085 J	0.89	0.032	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Arsenic	5.0	0.89	0.033	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Barium	224	0.44	0.14	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Beryllium	0.024 U	0.44	0.024	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Cadmium	1.7	0.44	0.038	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Calcium	342000	1100	49	mg/kg	50	06/17/15	06/19/15	EG	SW846 6020A [3]	SW846 3050B [4]
Chromium	0.54	0.44	0.068	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Lead	1030	1.8	0.25	mg/kg	20	06/17/15	06/19/15	EG	SW846 6020A [3]	SW846 3050B [4]
Magnesium	2130	110	4.5	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Mercury	0.021 U	0.053	0.021	mg/kg	1	06/17/15	06/17/15	CC	SW846 7471A [1]	SW846 7471A [5]
Nickel	2.6	0.89	0.058	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Selenium	0.66 J	0.89	0.11	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Silver	0.031 U	0.44	0.031	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11106
(2) Instrument QC Batch: MA11114
(3) Instrument QC Batch: MA11120
(4) Prep QC Batch: MP26109
(5) Prep QC Batch: MP26111

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID:	2015-COF-SOLID-01 0-0.25		
Lab Sample ID:	TC68548-1	**Date Sampled:**	06/08/15
Matrix:	SO - Solid	**Date Received:**	06/10/15
		Percent Solids:	57.8
Project:	7020112C079 / Stewart Creek		

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Solids, Percent	57.8			%	1	06/12/15	PA	SM 2540 G
Sulfate	75.2	4.3	2.2	mg/kg	1	06/17/15 12:16	ES	EPA 300
pH [a]	8.70			su	1	06/12/15 16:15	MS	SW846 9045C

(a) temp. 22.0 c

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SOLID-01 0-0.25
Lab Sample ID: TC68548-1A
Matrix: SO - Solid
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: 57.8
Project: 7020112C079 / Stewart Creek

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	MQL	SDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.0051 U			0.025	0.0051	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Arsenic	0.0074 J	D004	5.0	0.050	0.0050	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Barium	0.48 J	D005	100	5.0	0.017	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Beryllium	0.00080 U			0.025	0.00080	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Cadmium	0.0070 J	D006	1.0	0.020	0.00045	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Chromium	0.0049 J	D007	5.0	0.050	0.0014	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Lead	0.14	D008	5.0	0.025	0.0089	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Mercury	0.000050 U	D009	0.20	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]
Nickel	0.020 J			0.20	0.0070	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Selenium	0.0049 U	D010	1.0	0.050	0.0049	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Silver	0.0012 U	D011	5.0	0.050	0.0012	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11100
(3) Prep QC Batch: MP26094
(4) Prep QC Batch: MP26101

MQL = Method Quantitation Limit SDL = Sample Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID: 2015-COF-SOLID-02 0-0.25
Lab Sample ID: TC68548-2
Matrix: SO - Solid
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: 54.7
Project: 7020112C079 / Stewart Creek

Metals Analysis

Analyte	Result	MQL	SDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Antimony	0.12 J	0.93	0.034	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Arsenic	10.1	0.93	0.035	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Barium	226	0.47	0.15	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Beryllium	0.025 U	0.47	0.025	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Cadmium [a]	0.23 J	0.93	0.081	mg/kg	10	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Calcium	335000	1200	52	mg/kg	50	06/17/15	06/19/15	EG	SW846 6020A [3]	SW846 3050B [4]
Chromium [a]	0.36 J	0.93	0.14	mg/kg	10	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Lead	870	0.93	0.13	mg/kg	10	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Magnesium	3780	230	9.6	mg/kg	10	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Mercury	0.021 U	0.054	0.021	mg/kg	1	06/17/15	06/17/15	CC	SW846 7471A [1]	SW846 7471A [5]
Nickel [a]	2.2	1.9	0.12	mg/kg	10	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Selenium	1.1	0.93	0.11	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]
Silver	0.033 U	0.47	0.033	mg/kg	5	06/17/15	06/18/15	EG	SW846 6020A [2]	SW846 3050B [4]

(1) Instrument QC Batch: MA11106
(2) Instrument QC Batch: MA11114
(3) Instrument QC Batch: MA11120
(4) Prep QC Batch: MP26109
(5) Prep QC Batch: MP26111

(a) Elevated reporting limit due to dilution required for matrix interference.

MQL = Method Quantitation Limit
SDL = Sample Detection Limit
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Report of Analysis

Client Sample ID: 2015-COF-SOLID-02 0-0.25
Lab Sample ID: TC68548-2
Matrix: SO - Solid
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: 54.7
Project: 7020112C079 / Stewart Creek

General Chemistry

Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method
Solids, Percent	54.7			%	1	06/12/15	PA	SM 2540 G
Sulfate	311	4.6	2.3	mg/kg	1	06/17/15 12:33	ES	EPA 300
pH [a]	10.03			su	1	06/12/15 16:15	MS	SW846 9045C

(a) temp. 22.1 c

MQL = Method Quantitation Limit
SDL = Sample Detection Limit

U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

Accutest Laboratories

Report of Analysis

Client Sample ID: 2015-COF-SOLID-02 0-0.25
Lab Sample ID: TC68548-2A
Matrix: SO - Solid
Date Sampled: 06/08/15
Date Received: 06/10/15
Percent Solids: 54.7
Project: 7020112C079 / Stewart Creek

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	MQL	SDL	Units	DF	Prep	Analyzed	By	Method
Antimony	0.0051 U			0.025	0.0051	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Arsenic	0.0050 U	D004	5.0	0.050	0.0050	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Barium	0.46 J	D005	100	5.0	0.017	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Beryllium	0.00080 U			0.025	0.00080	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Cadmium	0.0011 J	D006	1.0	0.020	0.00045	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Chromium	0.0014 U	D007	5.0	0.050	0.0014	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Lead	0.23	D008	5.0	0.025	0.0089	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Mercury	0.000050 U	D009	0.20	0.00020	0.000050	mg/l	1	06/15/15	06/15/15	CC	SW846 7470A [1]
Nickel	0.013 J			0.20	0.0070	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Selenium	0.0049 U	D010	1.0	0.050	0.0049	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]
Silver	0.0012 U	D011	5.0	0.050	0.0012	mg/l	5	06/15/15	06/15/15	NS	SW846 6010B [2]

(1) Instrument QC Batch: MA11098
(2) Instrument QC Batch: MA11100
(3) Prep QC Batch: MP26094
(4) Prep QC Batch: MP26101

MQL = Method Quantitation Limit SDL = Sample Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 6/96)
U = Indicates a result < SDL
J = Indicates a result > = SDL but < MQL

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- LRC Form

TC68548

CHAIN OF CUSTODY RECORD

APEX

Office Location
Dallas

Project Manager R. Simpson

Laboratory: Accutest
Address:
Contact:
Phone: 713-271-4700
PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°):

1	2	3	4	5

Page 1 of 1

Sampler's Name: Jason Minter

Sampler's Signature:

Proj. No.: 7020112C079

Project Name: Stewart Creek

ANALYSIS REQUESTED
- TX11 Metals + Ca; Mg SW846 #6020/7471
- TCLP TX11 metals + Ca; Mg SW-846 #1311/6020/7471
- Sulfate ~~SW846 #9056~~ EPA Method 300

	Matrix	Date	Time	Comp	Grab	Identifying Marks of Sample(s)	Start Depth	End Depth	VOA	A/G 1 Lt.	250 ml	Glass Jar	P/O	TX11 Metals + Ca; Mg SW846 #6020/7471	TCLP TX11 metals + Ca; Mg SW-846 #1311/6020/7471	Sulfate ~~SW846 #9056~~ EPA Method 300	Lab Sample ID (Lab Use Only)
1	S	6-8-15	1914		X	2015-COF-SOLID-01	0	0.25					1	X	X	X	
2	S	6-8-15	2015		X	2015-COF-SOLID-02	0	0.25					1	X	X	X	
	W	—	—			Temp Blank	—	—			1						

WFE JM 6-8-15

Turn around time ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

Relinquished by (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	6-8-15	1910	FedEx	6-8-15	1910
FedEx	6/10/15	0900	Bianca Henry	6/10/15	0900

NOTES: FedEx 617012796104

Matrix: WW - Wastewater, W - Water, S - Soil, SD - Solid, L - Liquid, A - Air Bag, C - Charcoal tube, SL - sludge, O - Oil
Container: VOA - 40 ml vial, A/G - Amber / Or Glass 1 Liter, 250 ml - Glass wide mouth, P/O - Plastic or other

Apex TITAN, Inc. • 2351 W. Northwest Hwy., Suite 3321 • Dallas, Texas 75220 • Office: 214-350-5469 • Fax 214-350-2914

TC68548: Chain of Custody
Page 1 of 3

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Accutest Laboratories Sample Receipt Summary

Page 1 of 2

Accutest Job Number: TC68548 **Client:** APEX **Project:** SEAWORTCREEK

Date / Time Received: 6/10/2015 **Delivery Method:** **Airbill #'s:** 617012796104

No. Coolers: 1 **Therm ID:** IR-5; **Temp Adjustment Factor:** 0;

Cooler Temps (Initial/Adjusted): #1: (0.8/0.8);

Cooler Security	**Y**	**or**	**N**		**Y**	**or**	**N**
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	**Y**	**or**	**N**
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:			
3. Cooler media:	Ice (Bag)		

Quality Control Preservation	**Y**	**or**	**N**	**N/A**	**WTB**	**STB**
1. Trip Blank present / cooler:	☐		☐	☑	☐	☐
2. Trip Blank listed on COC:	☐		☐	☑		
3. Samples preserved properly:	☑		☐			
4. VOCs headspace free:	☐		☐	☑		

Sample Integrity - Documentation	**Y**	**or**	**N**
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	**Y**	**or**	**N**
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	**Y**	**or**	**N**	**N/A**
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Sample Receipt Log

Job #: TC68548 **Date / Time Received:** 6/10/2015 9:00:00 AM **Initials:** BH

Client: APEX

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
1	TC68548-1	4oz	1	2-18	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8
1	TC68548-2	4oz	1	2-18	N/P	Note #2 - Preservative check not applicable.	IR-5	0.8	0	0.8

Appendix A Laboratory Data Package Cover Page

TC68548 This data package consists of

☐ This signature page, the laboratory review checklist, and the following reportable data:
☐ 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 5.13 or ISO/IEC 17025 Section 5.10
  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
  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
☐ 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 Report. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld.

Check, if applicable: This laboratory meets an exception under 30 TAC&25.6 and was last inspection by
[ ] [X] TCEQ or [ ] ________ on April 2011. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

QA Manager

Name (Printed)	Signature	Official Title (printed)	Date
Richard Rodriguez		Laboratory Director	6/22/2015

LABORATORY REVIEW CHECKLIST: REPORTABLE DATA

Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/22/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68548**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GN66305, GN66306, GP32496, MP26094, MP26101, MP26109, MP26111**

#^{1}	A^2	DESCRIPTION	YES	NO	NA^3	NR^4	ER #^{5}
R1	**OI**	**CHAIN-OF-CUSTODY (C-O-C):**					
		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**	**Sample and quality control (QC) identification**					
		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**	**Test reports**					
		Were 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 TIC's reported?			X		
R4	**O**	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	**OI**	**Test reports/summary forms for blank samples**					
		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**	**Laboratory control samples (LCS):**					
		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 required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectablility 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**	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		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			**4**
		Were the MS/MSD RPDs within laboratory QC limits?		X			**4**
R8	**OI**	**Analytical duplicate data**					
		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**	**Method quantitation limits (MQLs):**					
		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	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?		X			**2**
R10	**OI**	**Other problems/anomalies**					
		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	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				**3**

Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/22/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68548**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GN66305, GN66306, GP32496, MP26094, MP26101, MP26109, MP26111**

#[1]	A[2]	DESCRIPTION	YES	NO	NA[3]	NR[4]	ER #[5]
S1	**OI**	**Initial calibration (ICAL)**					
		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**	**Initial and continuing calibration verification (ICCV AND CCV) and continuing**					
		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			**5**
S3	**O**	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	**O**	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	**OI**	**Raw data (NELAC Section 5.5.10)**					
		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**	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	**O**	**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	**I**	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	**I**	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			**4**
S10	**OI**	**Method detection limit (MDL) studies**					
		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**	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	**OI**	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate source?	X				
S13	**OI**	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	**OI**	**Demonstration of analyst competency (DOC)**					
		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**	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documentated, verified, and validated, where applicable?	X				
S16	**OI**	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

LABORATORY REVIEW CHECKLIST (continued): Exception Reports			
Laboratory Name:	**Accutest Gulf Coast**	LRC Date:	**6/22/2015**
Project Name:	**7020112C079 / Stewart Creek**	Laboratory Project Number:	**TC68548**
Reviewer Name:	**Anita Patel**	Prep Batch Number(s):	**GN66305, GN66306, GP32496, MP26094, MP26101, MP26109, MP26111**

ER#[1]	**Description**
1	For reporting purposes, the MQL is defined in the report as the RL. The unadjusted MQL/RL is reported in the method blank. The SDL is defined in the report as the MDL.
2	For reporting purposes, the method blank represents the unadjusted MQL. The DCS is on file in the laboratory and is not included in the laboratory data package.
3	The laboratory is NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices, and methods associated with this laboratory data package for analytes that are listed in the Texas Fields of Accreditation.
4	All anomalies are discussed in the case narrative.
5	See Metals CCB MDL check section of report.

1ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on

Gulf Coast
ACCUTEST
LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- Metals CCB MDL Check

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26094
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Prep Date:					06/15/15		06/15/15
Aluminum	1.0	.041	.061				
Antimony	0.025	.005	.0051	-0.0096	<0.025	-0.0090	<0.025
Arsenic	0.050	.0085	.005	-0.00045	<0.050	-0.00065	<0.050
Barium	5.0	.0049	.017	0.0015	<5.0	-0.00047	<5.0
Beryllium	0.025	.00028	.0008	-0.00038	<0.025	-0.00079	<0.025
Boron	0.50	.007	.039				
Cadmium	0.020	.00055	.00045	-0.00085	<0.020	-0.00058	<0.020
Calcium	25	.037	.12				
Chromium	0.050	.0012	.0014	-0.00036	<0.050	-0.0021	<0.050
Cobalt	0.25	.00075	.0011				
Copper	0.13	.0056	.03				
Iron	0.50	.0057	.12				
Lead	0.025	.005	.0089	-0.0022	<0.025	0.00097	<0.025
Lithium	1.5	.01	.01				
Magnesium	25	.038	.04				
Manganese	0.075	.00027	.0093				
Molybdenum	0.050	.002	.001				
Nickel	0.20	.0035	.007	0.0029	<0.20	0.0	<0.20
Potassium	25	.2	.22				
Selenium	0.050	.0077	.0049	-0.0089	<0.050	-0.015	<0.050
Silver	0.050	.0058	.0012	0.00099	<0.050	-0.00036	<0.050
Sodium	25	.046	.52				
Strontium	0.050	.00031	.002				
Thallium	0.050	.0034	.0058				
Tin	0.10	.0035	.014				
Titanium	0.10	.0015	.0015				
Vanadium	0.25	.0015	.0015				
Zinc	0.50	.0026	.017				

Associated samples MP26094: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26094
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 06/15/15

Metal	TC68548-1A Original	MS	Spikelot MPTW11	% Rec	QC Limits
Aluminum					
Antimony	0.0	0.42	0.40	105.0	75-125
Arsenic	0.0	0.44	0.40	110.0	75-125
Barium	0.48	0.85	0.40	92.5	75-125
Beryllium	0.0	0.42	0.40	105.0	75-125
Boron					
Cadmium	0.0070	0.43	0.40	105.8	75-125
Calcium					
Chromium	0.0049	0.41	0.40	101.3	75-125
Cobalt					
Copper					
Iron					
Lead	0.14	0.51	0.40	92.5	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel	0.020	0.40	0.40	95.0	75-125
Potassium					
Selenium	0.0	0.43	0.40	107.5	75-125
Silver	0.0	0.41	0.40	102.5	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP26094: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26094
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 06/15/15

	TC68548-1A		Spikelot		MSD	QC
Metal	Original	MSD	MPTW11	% Rec	RPD	Limit
Aluminum						
Antimony	0.0	0.42	0.40	105.0	0.0	20
Arsenic	0.0	0.44	0.40	110.0	0.0	20
Barium	0.48	0.86	0.40	95.0	1.2	20
Beryllium	0.0	0.42	0.40	105.0	0.0	20
Boron						
Cadmium	0.0070	0.43	0.40	105.8	0.0	20
Calcium						
Chromium	0.0049	0.41	0.40	101.3	0.0	20
Cobalt						
Copper						
Iron						
Lead	0.14	0.52	0.40	95.0	1.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel	0.020	0.40	0.40	95.0	0.0	20
Potassium						
Selenium	0.0	0.43	0.40	107.5	0.0	20
Silver	0.0	0.41	0.40	102.5	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP26094: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26094
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: mg/l

Prep Date: 06/15/15

Metal	BSP Result	Spikelot MPTW11	% Rec	QC Limits
Aluminum				
Antimony	0.40	0.40	100.0	80-120
Arsenic	0.42	0.40	105.0	80-120
Barium	0.41	0.40	102.5	80-120
Beryllium	0.43	0.40	107.5	80-120
Boron				
Cadmium	0.41	0.40	102.5	80-120
Calcium				
Chromium	0.41	0.40	102.5	80-120
Cobalt				
Copper				
Iron				
Lead	0.37	0.40	92.5	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	0.38	0.40	95.0	80-120
Potassium				
Selenium	0.43	0.40	107.5	80-120
Silver	0.41	0.40	102.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26094: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26094
Matrix Type: LEACHATE

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/15/15

Metal	TC68548-1A Original	SDL 5:25	%DIF	QC Limits
Aluminum				
Antimony	0.00	0.00	NC	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	479	467	2.5	0-10
Beryllium	0.00	0.00	NC	0-10
Boron				
Cadmium	7.01	0.00	100.0(a)	0-10
Calcium				
Chromium	4.86	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	136	123	9.5	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel	20.5	20.6	0.6	0-10
Potassium				
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26094: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26101
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 06/15/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.00020	.00005	.00005	-0.000045	<0.00020

Associated samples MP26101: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26101
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 06/15/15

Metal	TC68548-1A Original	MS	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	0.0	0.0030	0.0030	100.0	75-125

Associated samples MP26101: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26101
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 06/15/15

Metal	TC68548-1A Original	MSD	Spikelot HGTXAQ40	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.0030	0.0030	100.0	0.0	20

Associated samples MP26101: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26101
Matrix Type: LEACHATE

Methods: SW846 7470A
Units: mg/l

Prep Date: 06/15/15

Metal	BSP Result	Spikelot HGTXAQ40	% Rec	QC Limits
Mercury	0.0031	0.0030	103.3	80-120

Associated samples MP26101: TC68548-1A, TC68548-2A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26109
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 06/17/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	13	3.1	.83		
Antimony	0.50	.006	.018	-0.087	<0.50
Arsenic	0.50	.015	.019	-0.068	<0.50
Barium	0.25	.0033	.081	-0.051	<0.25
Beryllium	0.25	.005	.013	-0.068	<0.25
Boron	1.3	.091	.7		
Cadmium	0.25	.0073	.022	-0.060	<0.25
Calcium	63	3.1	2.8	-1.6	<63
Chromium	0.25	.0078	.038	-0.059	<0.25
Cobalt	0.50	.0048	.018		
Copper	0.50	.011	.057		
Iron	13	4	.99		
Lithium	0.25	.088			
Lead	0.25	.0063	.035	-0.031	<0.25
Magnesium	63	3	2.6	-0.52	<63
Manganese	0.25	.0065	.12		
Molybdenum	0.25	.088	.09		
Nickel	0.50	.0068	.033	0.024	<0.50
Potassium	63	3.3	1.2		
Selenium	0.50	.12	.061	-0.0088	<0.50
Silver	0.25	.0045	.017	-0.017	<0.25
Sodium	63	3	2.9		
Strontium	1.3	.0085	.015		
Thallium	0.25	.013	.024		
Tin	1.3	.012	.09		
Titanium	1.3	.073	.052		
Vanadium	0.25	.0085	.045		
Zinc	0.50	.011	.15		

Associated samples MP26109: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26109
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 06/17/15

Metal	TC67604-12 Original	MS	Spikelot MPTW11	% Rec	QC Limits
Antimony	14.6	33.4	24.2	77.8	75-125
Arsenic	158	241	24.2	343.3(a)	75-125
Barium	250	202	24.2	-198.5(a	75-125
Beryllium	0.49	21.4	24.2	86.5	75-125
Cadmium	0.82	25.0	24.2	100.0	75-125
Calcium	61700	69700	3020	264.7(a)	75-125
Chromium	37.0	61.1	24.2	99.7	75-125
Lead	24.7	64.0	24.2	162.5N(b	75-125
Magnesium	2460	5390	3020	96.9	75-125
Nickel	10.2	36.3	24.2	107.9	75-125
Selenium	0.50	16.6	24.2	66.6N(b)	75-125
Silver	0.72	25.4	24.2	102.1	75-125

Associated samples MP26109: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
(b) Spike recovery indicates possible matrix interference or sample non-homogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26109
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 06/17/15

Metal	TC67604-12 Original	MSD	Spikelot MPTW11	% Rec	MSD RPD	QC Limit
Antimony	14.6	26.6	24.2	49.6N(a)	22.7 (b)	20
Arsenic	158	144	24.2	-57.9(c)	50.4 (b)	20
Barium	250	180	24.2	-289.5(c	11.5	20
Beryllium	0.49	20.0	24.2	80.7	6.8	20
Cadmium	0.82	23.5	24.2	93.8	6.2	20
Calcium	61700	68000	3020	208.4(c)	2.5	20
Chromium	37.0	50.9	24.2	57.5N(a)	18.2	20
Lead	24.7	62.8	24.2	157.6N(a	1.9	20
Magnesium	2460	4990	3020	83.7	7.7	20
Nickel	10.2	34.5	24.2	100.5	5.1	20
Selenium	0.50	16.1	24.2	64.5N(a)	3.1	20
Silver	0.72	24.0	24.2	96.3	5.7	20

Associated samples MP26109: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference or sample non-homogeneity.
(b) High RPD due to possible sample nonhomogeneity or matrix interference.
(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26109
Matrix Type: SOLID

Methods: SW846 6020A
Units: mg/kg

Prep Date: 06/17/15

Metal	LCS Result	Spikelot MPLCD068	% Rec	QC Limits
Aluminum				
Antimony	80.2	94	85.3	0-214
Arsenic	110	113	97.3	78-122
Barium	169	155	109.0	82-117
Beryllium	105	109	96.3	83-117
Boron				
Cadmium	70.1	67.5	103.9	82-118
Calcium	5920	5850	101.2	81-119
Chromium	172	164	104.9	79-121
Cobalt				
Copper				
Iron				
Lithium				
Lead	91.4	90.1	101.4	82-119
Magnesium	3070	2790	110.0	76-125
Manganese				
Molybdenum				
Nickel	88.2	89.3	98.8	82-118
Potassium				
Selenium	141	156	90.4	78-122
Silver	53.7	52.6	102.1	75-125
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP26109: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26109
Matrix Type: SOLID

Methods: SW846 6020A
Units: ug/l

Prep Date: 06/17/15

Metal	TC67604-12 Original	SDL 5:25	%DIF	QC Limits
Antimony	239	243	1.7	0-10
Arsenic	2590	3440	32.9*(a)	0-10
Barium	4090	4110	0.5	0-10
Beryllium	8.01	3.65	54.5*(a)	0-10
Cadmium	13.4	9.66	28.2*(a)	0-10
Calcium	1010000	1170000	15.5*(a)	0-10
Chromium	607	685	12.9*(a)	0-10
Lead	405	431	6.6	0-10
Magnesium	40400	44100	9.2	0-10
Nickel	168	180	7.2	0-10
Selenium	8.24	13.0	57.4 (b)	0-10
Silver	11.8	9.45	19.6*(a)	0-10

Associated samples MP26109: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26111
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date:					06/17/15
Metal	RL	IDL	MDL	MB raw	final
Mercury	0.029	.007	.011	-0.0074	<0.029

Associated samples MP26111: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26111
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/15

Metal	TC68645-1 Original	MS	Spikelot HGTXWS1	% Rec	QC Limits
Mercury	0.0	0.39	0.461	84.7	75-125

Associated samples MP26111: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26111
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/15

Metal	TC68645-1 Original	MSD	Spikelot HGTXWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	0.39	0.461	84.5	0.0	20

Associated samples MP26111: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

QC Batch ID: MP26111
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/15

Metal	LCS Result	Spikelot HGLCD068	% Rec	QC Limits
Mercury	6.7	8.37	80.0	73-128

Associated samples MP26111: TC68548-1, TC68548-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Metals CCB MDL Check

Job Number: TC68548
Account: APEXTTXD APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

The following elements are braketed by CCB's at or above the MDL.

Sample	Element	Run ID	Time	MDL	Units	CCB Before		CCB After	
TC68548-1A	Mercury	MA11098	17:00	.050	ug/l	CCB5	-0.067	CCB6	-0.056
TC68548-2A	Mercury	MA11098	17:06	.050	ug/l	CCB5	-0.067	CCB6	-0.056
TC68548-1A	Antimony	MA11100	17:00	1.0	ug/l	CCB7	-0.38	CCB8	-1.0
TC68548-2A	Antimony	MA11100	17:36	1.0	ug/l	CCB7	-0.38	CCB8	-1.0
TC68548-1A	Selenium	MA11100	17:00	.98	ug/l	CCB7	-1.6	CCB8	-0.53
TC68548-2A	Selenium	MA11100	17:36	.98	ug/l	CCB7	-1.6	CCB8	-0.53
TC68548-1	Antimony	MA11114	13:15	.073	ug/l	CCB2	-0.27	CCB3	-0.30
TC68548-2	Antimony	MA11114	13:27	.073	ug/l	CCB2	-0.27	CCB3	-0.30
TC68548-1	Arsenic	MA11114	13:15	.074	ug/l	CCB2	-0.25	CCB3	-0.28
TC68548-2	Arsenic	MA11114	13:27	.074	ug/l	CCB2	-0.25	CCB3	-0.28
TC68548-1	Beryllium	MA11114	13:15	.053	ug/l	CCB2	-0.27	CCB3	-0.27
TC68548-2	Beryllium	MA11114	13:27	.053	ug/l	CCB2	-0.27	CCB3	-0.27
TC68548-1	Cadmium	MA11114	13:15	.086	ug/l	CCB2	-0.24	CCB3	-0.24
TC68548-2	Cadmium	MA11114	13:33	.086	ug/l	CCB2	-0.24	CCB3	-0.24
TC68548-1	Chromium	MA11114	13:15	.15	ug/l	CCB2	-0.25	CCB3	-0.26
TC68548-2	Chromium	MA11114	13:33	.15	ug/l	CCB2	-0.25	CCB3	-0.26
TC68548-2	Lead	MA11114	13:33	.14	ug/l	CCB2	-0.16	CCB3	-0.092
TC68548-1	Calcium	MA11120	07:44	11	ug/l	CCB2	-21	CCB3	-18
TC68548-2	Calcium	MA11120	08:03	11	ug/l	CCB2	-21	CCB3	-18
TC68548-1	Lead	MA11120	07:37	.14	ug/l	CCB2	-0.23	CCB3	-0.20

Calibration blank validation to the MDL is not a method requirement, but is included for information purposes only.

Gulf Coast
ACCUTEST
LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- General Chemistry CCB MDL Check

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP32496/GN66412	2.5	0.0	mg/kg	49.8	48.2	96.8	90-110%
Chloride	GP32496/GN66412	2.5	0.0	mg/kg	49.8	50.3	101.0	90-110%
Fluoride	GP32496/GN66412	2.5	0.0	mg/kg	49.8	49.2	98.8	90-110%
Sulfate	GP32496/GN66412	2.5	0.0	mg/kg	49.8	53.7	107.8	90-110%

Associated Samples:
Batch GP32496: TC68548-1, TC68548-2
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Bromide	GP32496/GN66412	TC68635-2	mg/kg	0.0	0.0	0.0	0-20%
Chloride	GP32496/GN66412	TC68635-2	mg/kg	194	196	1.0	0-20%
Fluoride	GP32496/GN66412	TC68635-2	mg/kg	84.9	84.5	0.5	0-20%
Solids, Percent	GN66305	TC68548-1	%	57.8	57.2	1.0	0-5%
Sulfate	GP32496/GN66412	TC68635-2	mg/kg	679	625	8.3	0-20%
pH	GN66306	TC68548-1	su	8.70	8.70	0.0	0-20%

Associated Samples:
Batch GN66305: TC68548-1, TC68548-2
Batch GN66306: TC68548-1, TC68548-2
Batch GP32496: TC68548-1, TC68548-2
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC68548
Account: APEXTTXD - APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP32496/GN66412	TC68635-2	mg/kg	0.0	72.1	91.9(a)	127.5N	80-120%
Chloride	GP32496/GN66412	TC68635-2	mg/kg	194	72.1	234(a)	55.5N	80-120%
Fluoride	GP32496/GN66412	TC68635-2	mg/kg	84.9	72.1	122(a)	51.5N	80-120%
Sulfate	GP32496/GN66412	TC68635-2	mg/kg	679	72.1	437(a)	-335.7(b)	80-120%

Associated Samples:
Batch GP32496: TC68548-1, TC68548-2
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Outside control limits due to matrix interference and/or sample nonhomogeneity.
(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

General Chemistry CCB MDL Check

Job Number: TC68548
Account: APEXTTXD APEX TITAN, Inc.
Project: 7020112C079 / Stewart Creek

The following parameters are braketed by CCB's at or above the MDL.

Sample	Parameter	Run ID	Time	MDL	Units	CCB Before	CCB After

No CCB's found at or above MDL.

Calibration blank validation to the MDL is not a method requirement, but is included for information purposes only.

Golder Associates

April 13, 2016 1302086

Matt Love
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2015 THIRD QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Love:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes FDS system operation during the third quarter of 2015. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall and into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. In their letter dated November 23, 2015, the TCEQ has also requested survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped. These data will be included in the next quarterly report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep floodwaters in Stewart Creek out of the operating portion of the facility, and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were observed over time (W&M, 2013); primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the third quarter of 2015 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35 and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the third quarter 2015 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the third quarter of 2015 other than described below:

- MW-33 and MW-34 were inaccessible for water level measurements at the time of the Third Quarter 2015 inspection as numerous frac tanks were staged in this area including on top of these two wells.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at the Frisco, Texas weather station located in Frisco, Texas (data obtained from http://www.friscoweather.com/daily.htm).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-35 and MW-46 were measured and recorded during the third quarter of 2015. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data. Water levels were not measured at MW-33 or MW-34 because the wells were covered by a water storage (frac) tanks at the time of the inspection. In general, water levels were higher during the second quarter of 2015, which appears to be a result of the heavy rainfall in the area in May and June 2015.

3.3 Floodwall Seepage

At the time of the wall inspection on August 8, 2015 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on August 8, 2015. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the French Drain System during third quarter 2015. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the third quarter of 2015 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Anne Faeth-Boyd

Abby Marlow
Staff Environmental Scientist

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Attachment A: French Drain Water Laboratory Analytical Results

ANM/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jul-15			Aug-15			Sep-15		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
8,369		1.6	996		0.19	4,067		1.95
Date	Flow observed Since Last Reading(gal)	Daily Precip (in)	Date	Flow observed Since Last Reading(gal)	Daily Precip (in)	Date	Flow observed Since Last Reading(gal)	Daily Precip (in)
Wednesday, July 01, 2015	814	0.29	Saturday, August 01, 2015	NR	0	Tuesday, September 01, 2015	24	0
Thursday, July 02, 2015	297	0	Sunday, August 02, 2015	NR	0	Wednesday, September 02, 2015	0	0.21
Friday, July 03, 2015	NR	0.11	Monday, August 03, 2015	146	0	Thursday, September 03, 2015	0	0.04
Saturday, July 04, 2015	NR	0.13	Tuesday, August 04, 2015	24	0	Friday, September 04, 2015	24	0.14
Sunday, July 05, 2015	NR	0	Wednesday, August 05, 2015	48	0	Saturday, September 05, 2015	NR	0
Monday, July 06, 2015	2148	0	Thursday, August 06, 2015	24	0	Sunday, September 06, 2015	NR	0
Tuesday, July 07, 2015	395	0.01	Friday, August 07, 2015	49	0	Monday, September 07, 2015	NR	0.02
Wednesday, July 08, 2015	803	0.50	Saturday, August 08, 2015	NR	0	Tuesday, September 08, 2015	24	0.15
Thursday, July 09, 2015	1018	0.56	Sunday, August 09, 2015	NR	0	Wednesday, September 09, 2015	860	0.50
Friday, July 10, 2015	522	0	Monday, August 10, 2015	72	0	Thursday, September 10, 2015	1093	0.23
Saturday, July 11, 2015	NR	0	Tuesday, August 11, 2015	24	0	Friday, September 11, 2015	348	0
Sunday, July 12, 2015	NR	0	Wednesday, August 12, 2015	24	0	Saturday, September 12, 2015	NR	0
Monday, July 13, 2015	920	0	Thursday, August 13, 2015	24	0	Sunday, September 13, 2015	NR	0
Tuesday, July 14, 2015	142	0	Friday, August 14, 2015	24	0	Monday, September 14, 2015	244	0
Wednesday, July 15, 2015	143	0	Saturday, August 15, 2015	NR	0	Tuesday, September 15, 2015	49	0
Thursday, July 16, 2015	145	0	Sunday, August 16, 2015	NR	0	Wednesday, September 16, 2015	25	0.02
Friday, July 17, 2015	97	0	Monday, August 17, 2015	74	0	Thursday, September 17, 2015	24	0.30
Saturday, July 18, 2015	95	0	Tuesday, August 18, 2015	75	0	Friday, September 18, 2015	23	0.01
Sunday, July 19, 2015	139	0	Wednesday, August 19, 2015	24	0	Saturday, September 19, 2015	NR	0.16
Monday, July 20, 2015	129	0	Thursday, August 20, 2015	44	0.01	Sunday, September 20, 2015	NR	0.16
Tuesday, July 21, 2015	NR	0	Friday, August 21, 2015	0	0	Monday, September 21, 2015	892	0
Wednesday, July 22, 2015	49	0	Saturday, August 22, 2015	NR	0	Tuesday, September 22, 2015	122	0
Thursday, July 23, 2015	50	0	Sunday, August 23, 2015	NR	0	Wednesday, September 23, 2015	97	0
Friday, July 24, 2015	49	0	Monday, August 24, 2015	93	0	Thursday, September 24, 2015	73	0
Saturday, July 25, 2015	NR	0	Tuesday, August 25, 2015	24	0	Friday, September 25, 2015	24	0
Sunday, July 26, 2015	NR	0	Wednesday, August 26, 2015	0	0	Saturday, September 26, 2015	NR	0
Monday, July 27, 2015	195	0	Thursday, August 27, 2015	0	0	Sunday, September 27, 2015	NR	0
Tuesday, July 28, 2015	73	0	Friday, August 28, 2015	24	0.01	Monday, September 28, 2015	73	0
Wednesday, July 29, 2015	49	0	Saturday, August 29, 2015	NR	0.17	Tuesday, September 29, 2015	24	0
Thursday, July 30, 2015	49	0	Sunday, August 30, 2015	NR	0	Wednesday, September 30, 2015	24	0.01
Friday, July 31, 2015	48	0	Monday, August 31, 2015	179	0			

Notes:
Precipitation data obtained from www.friscoweather.com/daily
Daily flow volumes provided by Exide.
NR - No Reading

Prepared by: AM 10/09/15
Checked by: JX 10/09/15
Reviewed by: AMF/FMB 3/24/16

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			09/08/15	4.17	626.81

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because recorded water depth was greater than total depth of the well

Prepared by: AM 10/12/15
Checked by: JX 10/12/15
Reviewed by: AMF/JAW/FMB 1/7/15

Table 3
French Drain Water
Analytical Data

	Sample ID FD072115-01		Sample ID FD072115-02	
	Date Collected 7/21/2015 10:15		Date Collected 7/21/2015 10:15	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.010	mg/L
Barium	NA	mg/L	0.100	mg/L
Cadmium	NA	mg/L	0.0014	mg/L
Chromium	NA	mg/L	0.019	mg/L
Copper	NA	mg/L	0.0557	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.195	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	0.009	mg/L
Selenium	NA	mg/L	0.0183	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.142	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Soilds	6.2	mg/L	NA	mg/L
Total Dissolved Solids	2,480	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected

Prepared by: KK 10/16/15
Checked by: AM 10/16/15
Reviewed by: AMF/JAW/FMB 1/7/15

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD072115-01**
Oxidor Sample ID: 15070431-009
Matrix: **Liquid**
Sample Received: 7/22/2015
Sample Collected: **7/21/2015 10:15**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	25	25.0	**2480**	mg/L	07/22/15 14:35	SM-2540-C	V.V.	
Total Suspended Solids	5	5.0	**6.2**	mg/L	07/23/15 10:20	SM-2540-D	V.V.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD072115-02**
Oxidor Sample ID: 15070431-010
Sample Received: 7/22/2015

Matrix: **Liquid**
Sample Collected: **7/21/2015 10:15**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 07/22/15 at 13:47								
Arsenic	0.005	0.005	**0.010**	mg/L	07/23/15 15:55	200.8	G.S.	
Barium	0.005	0.005	**0.100**	mg/L	07/23/15 15:55	200.8	G.S.	
Cadmium	0.001	0.0010	**0.0014**	mg/L	07/23/15 15:55	200.8	G.S.	
Chromium	0.005	0.005	**0.019**	mg/L	07/23/15 15:55	200.8	G.S.	
Copper	0.005	0.0050	**0.0557**	mg/L	07/23/15 15:55	200.8	G.S.	
Iron	0.5	0.50	ND	mg/L	07/23/15 15:55	200.8	G.S.	
Lead	0.005	0.005	**0.195**	mg/L	07/23/15 15:55	200.8	G.S.	
Manganese	0.002	0.002	ND	mg/L	07/23/15 15:55	200.8	G.S.	
Nickel	0.005	0.005	**0.009**	mg/L	07/23/15 15:55	200.8	G.S.	
Selenium	0.005	0.0050	**0.0183**	mg/L	07/23/15 15:55	200.8	G.S.	
Silver	0.001	0.001	ND	mg/L	07/23/15 15:55	200.8	G.S.	
Zinc	0.005	0.005	**0.142**	mg/L	07/23/15 15:55	200.8	G.S.	
Digested by method 245.1 on 07/23/15 at 11:03								
Mercury	0.0002	0.0002	ND	mg/L	07/23/15 17:28	245.1	C.F.	

January 24, 2017 1302086

Brad Weaver
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2015 FOURTH QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested that monitoring of the FDS be carried out by the facility and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the fourth quarter of 2015. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in the previous report, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc., 2013), the concrete retaining wall along the southern edge of the process area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility, and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plant. Areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected behind the flood wall and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment and offsite disposal. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the fourth quarter of 2015 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35 and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the fourth quarter 2015 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the fourth quarter of 2015 other than described below:

- MW-32 and MW-46 were inaccessible for water level measurements at the time of the Fourth Quarter 2015 inspection due to staged equipment.

A more detailed description of the results of data collection activities and inspections is included in Section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/ personal-weather-station/dashboard?ID=KTXDALLA25# history/ s20150203/e20160204/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-33, MW-34, and MW-35 were measured and recorded during the fourth quarter of 2015. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. As mentioned above, water levels were not measured at MW-32 or MW-46 during the Fourth Quarter 2015 inspections. In general, water levels were similar to those measured in the second quarter of 2015.

3.3 Floodwall Seepage

At the time of the wall inspection on December 17, 2015 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on December 17, 2015. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during fourth quarter 2015. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the fourth quarter of 2015 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Brett E. Forthaus
Environmental Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Oct-15			Nov-15			Dec-15		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
31,990		6.94	27,367		10.4	8,406		5.06
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
10/1/2015	97	0.06	11/1/2015	NR	0.12	12/1/2015	0	0.00
10/2/2015	171	0.00	11/2/2015	12,196	0.01	12/2/2015	0	0.00
10/3/2015	NR	0.00	11/3/2015	1,005	0.01	12/3/2015	0	0.00
10/4/2015	NR	0.00	11/4/2015	736	0.08	12/4/2015	0	0.00
10/5/2015	242	0.00	11/5/2015	504	0.18	12/5/2015	NR	0.00
10/6/2015	49	0.00	11/6/2015	706	0.00	12/6/2015	NR	0.00
10/7/2015	24	0.00	11/7/2015	0	0.09	12/7/2015	0	0.00
10/8/2015	48	0.00	11/8/2015	0	0.00	12/8/2015	0	0.00
10/9/2015	24	0.00	11/9/2015	1,024	0.00	12/9/2015	0	0.00
10/10/2015	NR	0.00	11/10/2015	NR	0.00	12/10/2015	0	0.00
10/11/2015	NR	0.00	11/11/2015	314	0.02	12/11/2015	NR	0.00
10/12/2015	73	0.00	11/12/2015	194	0.00	12/12/2015	NR	0.03
10/13/2015	24	0.00	11/13/2015	122	0.00	12/13/2015	NR	0.93
10/14/2015	0	0.00	11/14/2015	NR	0.00	12/14/2015	0	0.00
10/15/2015	33	0.00	11/15/2015	NR	0.76	12/15/2015	6,309	0.00
10/16/2015	0	0.00	11/16/2015	3,487	0.32	12/16/2015	177	0.00
10/17/2015	NR	0.00	11/17/2015	0	0.73	12/17/2015	796	0.00
10/18/2015	NR	0.00	11/18/2015	4,118	0.00	12/18/2015	NR	0.00
10/19/2015	21	0.00	11/19/2015	1,440	0.00	12/19/2015	NR	0.00
10/20/2015	0	0.00	11/20/2015	0	0.00	12/20/2015	NR	0.00
10/21/2015	0	0.00	11/21/2015	NR	0.00	12/21/2015	828	0.00
10/22/2015	25	2.04	11/22/2015	NR	0.00	12/22/2015	150	0.00
10/23/2015	13,488	2.09	11/23/2015	1,276	0.00	12/23/2015	NR	0.00
10/24/2015	NR	0.73	11/24/2015	123	0.00	12/24/2015	NR	0.00
10/25/2015	NR	0.08	11/25/2015	122	0.00	12/25/2015	NR	0.00
10/26/2015	12,247	0.00	11/26/2015	NR	2.25	12/26/2015	NR	1.54
10/27/2015	2,545	0.00	11/27/2015	NR	4.42	12/27/2015	NR	2.10
10/28/2015	1,194	0.00	11/28/2015	NR	0.57	12/28/2015	146	0.45
10/29/2015	696	0.00	11/29/2015	NR	0.81	12/29/2015	0	0.01
10/30/2015	989	1.23	11/30/2015	0	0.03	12/30/2015	0	0.00
10/31/2015	NR	0.71	---	---	---	12/31/2015	0	0.00

Notes:

Precipitation data obtained from https://www.wunderground.com/personal-weather-station/ dashboard?ID=KTXDALLA25#history/s20150203/e20160204/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: PRB 2/4/16
Checked by: MDT 2/4/16, BEF 10/31/16
Reviewed by: FMB 01/02/17

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Monitoring Well Water Elevations					
Well ID	**TOC Elevation (ft msl)**	**Screen Interval (ft bgs)**	**Measurement Date**	**Depth to Groundwater (ft btoc)**	**Groundwater Elevation (ft msl)**
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81

Prepared by: PRB 2/4/2016, updated 10/27/2016
Checked by: MDT 2/4/2016, 10/27/2016
Reviewed by: AMF 10/28/2016, FMB 01/02/17

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Table 3
French Drain Water
Analytical Data

	Sample ID FD101515-01		**Sample ID** FD101515-02		**Sample ID** FD101515-03	
	Date Collected 10/15/2015 12:00		**Date Collected** 10/15/2015 12:00		**Date Collected** 10/15/2015 12:00	
Metals						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.016	mg/L	NA	mg/L
Barium	NA	mg/L	0.068	mg/L	NA	mg/L
Cadmium	NA	mg/L	0.0036	mg/L	NA	mg/L
Chromium	NA	mg/L	0.024	mg/L	NA	mg/L
Copper	NA	mg/L	0.1259	mg/L	NA	mg/L
Iron	NA	mg/L	ND	mg/L	NA	mg/L
Lead	NA	mg/L	0.351	mg/L	NA	mg/L
Manganese	NA	mg/L	0.007	mg/L	NA	mg/L
Nickel	NA	mg/L	0.019	mg/L	NA	mg/L
Selenium	NA	mg/L	0.0331	mg/L	NA	mg/L
Silver	NA	mg/L	ND	mg/L	NA	mg/L
Zinc	NA	mg/L	0.192	mg/L	NA	mg/L
Mercury	NA	mg/L	0.0003	mg/L	NA	mg/L
General Chemistry						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	NA	mg/L	NA	mg/L	23	mg/L
Total Dissolved Solids	3,280	mg/L	NA	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected

Prepared by: PRB 02/02/16
Checked by: MDT 02/04/16
Reviewed by: FMB 01/02/17

LEGEND

● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline

50 25 0 50

Feet

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT

Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
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OXIDOR Laboratories

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD101515-01**
Oxidor Sample ID: 15100349-005
Sample Received: 10/15/2015

Matrix: **Liquid**
Sample Collected: **10/15/2015 12:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	25	25.0	**3280**	mg/L	10/15/15 16:25	SM-2540-C	P.C.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD101515-02**
Oxidor Sample ID: 15100348-005
Sample Received: 10/15/2015

Matrix: **Liquid**
Sample Collected: **10/15/2015 12:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 10/16/15 at 09:50								
Arsenic	0.005	0.005	**0.016**	mg/L	10/19/15 16:25	200.8	C.F.	
Barium	0.005	0.005	**0.068**	mg/L	10/19/15 16:25	200.8	C.F.	
Cadmium	0.001	0.0010	**0.0036**	mg/L	10/19/15 16:25	200.8	C.F.	
Chromium	0.005	0.005	**0.024**	mg/L	10/19/15 16:25	200.8	C.F.	
Copper	0.005	0.0050	**0.1259**	mg/L	10/19/15 16:25	200.8	C.F.	
Iron	0.5	0.50	ND	mg/L	10/19/15 16:25	200.8	C.F.	
Lead	0.005	0.005	**0.351**	mg/L	10/19/15 16:25	200.8	C.F.	
Manganese	0.002	0.002	**0.007**	mg/L	10/19/15 16:25	200.8	C.F.	
Nickel	0.005	0.005	**0.019**	mg/L	10/19/15 16:25	200.8	C.F.	
Selenium	0.005	0.0050	**0.0331**	mg/L	10/19/15 16:25	200.8	C.F.	
Silver	0.001	0.001	ND	mg/L	10/19/15 16:25	200.8	C.F.	
Zinc	0.005	0.005	**0.192**	mg/L	10/19/15 16:25	200.8	C.F.	
Digested by method 245.1 on 10/19/15 at 10:27								
Mercury	0.0002	0.0002	**0.0003**	mg/L	10/19/15 17:20	245.1	M.A.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD101515-03**
Oxidor Sample ID: 15100350-005
Sample Received: 10/15/2015

Matrix: **Liquid**
Sample Collected: **10/15/2015 12:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Suspended Solids	5	5.0	**22.8**	mg/L	10/16/15 13:53	SM-2540-D	P.C.	

January 24, 2017 1302086

Brad Weaver
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2016 FIRST QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

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This report includes general FDS background information and summarizes operation of the FDS system during the first quarter of 2016. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in the previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

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2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the first quarter of 2016 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35 and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the first quarter 2016 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the first quarter of 2016.

A more detailed description of the results of data collection activities and inspections is included in Section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25# history/s20150411/e20160411/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the first quarter of 2016. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary much from the previous readings in 2015 with some wells having a decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on February 3, 2016 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on February 3, 2016. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during first quarter 2016. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the first quarter of 2016 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Brett Forthaus
Environmental Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jan-16			Feb-16			Mar-16		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
14,181		1.12	2,789		2.28	11,701		2.08
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Friday, January 01, 2016	NR	0.00	Monday, February 01, 2016	303	0.00	Tuesday, March 01, 2016	5,238	0.00
Saturday, January 02, 2016	NR	0.00	Tuesday, February 02, 2016	76	0.00	Wednesday, March 02, 2016	385	0.00
Sunday, January 03, 2016	NR	0.00	Wednesday, February 03, 2016	76	0.00	Thursday, March 03, 2016	70	0.00
Monday, January 04, 2016	0	0.00	Thursday, February 04, 2016	55	0.00	Friday, March 04, 2016	196	0.00
Tuesday, January 05, 2016	0	0.00	Friday, February 05, 2016	51	0.00	Saturday, March 05, 2016	NR	0.00
Wednesday, January 06, 2016	0	0.65	Saturday, February 06, 2016	NR	0.01	Sunday, March 06, 2016	NR	0.00
Thursday, January 07, 2016	0	0.06	Sunday, February 07, 2016	NR	0.00	Monday, March 07, 2016	340	0.10
Friday, January 08, 2016	0	0.01	Monday, February 08, 2016	151	0.00	Tuesday, March 08, 2016	55	1.01
Saturday, January 09, 2016	NR	0.00	Tuesday, February 09, 2016	51	0.00	Wednesday, March 09, 2016	1,338	0.45
Sunday, January 10, 2016	NR	0.00	Wednesday, February 10, 2016	25	0.00	Thursday, March 10, 2016	468	0.22
Monday, January 11, 2016	6,836	0.00	Thursday, February 11, 2016	51	0.00	Friday, March 11, 2016	315	0.08
Tuesday, January 12, 2016	0	0.00	Friday, February 12, 2016	50	0.00	Saturday, March 12, 2016	NR	0.00
Wednesday, January 13, 2016	3,856	0.00	Saturday, February 13, 2016	NR	0.00	Sunday, March 13, 2016	NR	0.00
Thursday, January 14, 2016	281	0.00	Sunday, February 14, 2016	NR	0.00	Monday, March 14, 2016	1,084	0.00
Friday, January 15, 2016	201	0.00	Monday, February 15, 2016	NR	0.00	Tuesday, March 15, 2016	147	0.00
Saturday, January 16, 2016	NR	0.03	Tuesday, February 16, 2016	130	0.00	Wednesday, March 16, 2016	124	0.00
Sunday, January 17, 2016	NR	0.01	Wednesday, February 17, 2016	25	0.00	Thursday, March 17, 2016	124	0.00
Monday, January 18, 2016	50	0.00	Thursday, February 18, 2016	25	0.00	Friday, March 18, 2016	74	0.01
Tuesday, January 19, 2016	461	0.00	Friday, February 19, 2016	50	0.00	Saturday, March 19, 2016	NR	0.00
Wednesday, January 20, 2016	187	0.00	Saturday, February 20, 2016	NR	0.00	Sunday, March 20, 2016	NR	0.00
Thursday, January 21, 2016	142	0.36	Sunday, February 21, 2016	NR	0.05	Monday, March 21, 2016	228	0.00
Friday, January 22, 2016	1,198	0.00	Monday, February 22, 2016	375	0.30	Tuesday, March 22, 2016	74	0.00
Saturday, January 23, 2016	NR	0.00	Tuesday, February 23, 2016	623	1.92	Wednesday, March 23, 2016	75	0.14
Sunday, January 24, 2016	NR	0.00	Wednesday, February 24, 2016	672	0.00	Thursday, March 24, 2016	NR	0.00
Monday, January 25, 2016	513	0.00	Thursday, February 25, 2016	0	0.00	Friday, March 25, 2016	NR	0.00
Tuesday, January 26, 2016	153	0.00	Friday, February 26, 2016	0	0.00	Saturday, March 26, 2016	NR	0.00
Wednesday, January 27, 2016	101	0.00	Saturday, February 27, 2016	NR	0.00	Sunday, March 27, 2016	NR	0.00
Thursday, January 28, 2016	127	0.00	Sunday, February 28, 2016	NR	0.00	Monday, March 28, 2016	114	0.00
Friday, January 29, 2016	75	0.00	Monday, February 29, 2016	0	0.00	Tuesday, March 29, 2016	137	0.00
Saturday, January 30, 2016	NR	0.00	---	---	---	Wednesday, March 30, 2016	558	0.06
Sunday, January 31, 2016	NR	0.00	---	---	---	Thursday, March 31, 2016	557	0.01

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20150411/e20160411/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: MDT 04/11/16
Checked by: BEF 11/01/16
Reviewed by: FMB 01/02/17

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26	631.93	5-15	3/11/2013	9.98	621.95
(Groundwater)			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
MW-29	633.51	4.5-14.5	3/11/2013	13.08	620.43
(Groundwater)			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
MW-31	636.71	8-23	5/13/2013	10.58	626.13
(Groundwater)			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
MW-32	630.96	2.5-5	1/21/2014	4.16	626.80
(Perched)			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
MW-33	632.59	2.5-5	1/21/2014	1.09	631.50
(Perched)			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
MW-34	632.83	2.5-5	1/21/2014	4.31	628.52
(Perched)			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
MW-35	632.55	2.5-5	1/21/2014	DRY	DRY
(Perched)			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
MW-46	630.98	10-20	1/21/2014	5.21	625.77
(Groundwater)			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75

Prepared by: MDT 04/11/16, updated 10/31/16
Checked by: BEF 11/01/16
Reviewed by: FMB 01/02/17

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Table 3
French Drain Water
Analytical Data

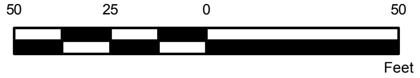
	Sample ID FD012016-01		**Sample ID** FD012016-02		**Sample ID** FD012016-03	
	Date Collected 1/20/2016 15:05		**Date Collected** 1/20/2016 15:05		**Date Collected** 1/20/2016 15:05	
Metals						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.015	mg/L	NA	mg/L
Barium	NA	mg/L	0.102	mg/L	NA	mg/L
Cadmium	NA	mg/L	0.0295	mg/L	NA	mg/L
Chromium	NA	mg/L	0.018	mg/L	NA	mg/L
Copper	NA	mg/L	0.0673	mg/L	NA	mg/L
Iron	NA	mg/L	1.79	mg/L	NA	mg/L
Lead	NA	mg/L	0.836	mg/L	NA	mg/L
Manganese	NA	mg/L	0.058	mg/L	NA	mg/L
Nickel	NA	mg/L	0.021	mg/L	NA	mg/L
Selenium	NA	mg/L	0.0101	mg/L	NA	mg/L
Silver	NA	mg/L	ND	mg/L	NA	mg/L
Zinc	NA	mg/L	0.107	mg/L	NA	mg/L
Mercury	NA	mg/L	0.0003	mg/L	NA	mg/L
General Chemistry						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	NA	mg/L	NA	mg/L	232	mg/L
Total Dissolved Solids	1,540	mg/L	NA	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected

Prepared by: MDT 04/07/16
Checked by: BEF 11/02/16
Reviewed by: FMB 01/02/17

LEGEND

- ● Transect Location
- ⌖ Monitoring Well Location
- 🟩 French Drain
- 🟥 Flood Wall
- — Approximate Creek Centerline



NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0
1 in

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD012016-02**
Oxidor Sample ID: 16010448-005
Sample Received: 1/21/2016
Matrix: **Liquid**
Sample Collected: **1/20/2016 15:05**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 01/21/16 at 11:41								
Arsenic	0.003	0.005	**0.015**	mg/L	01/21/16 16:17	200.8	C.F.	
Barium	0.003	0.005	**0.102**	mg/L	01/21/16 16:17	200.8	C.F.	
Cadmium	0.0005	0.001	**0.0295**	mg/L	01/21/16 16:17	200.8	C.F.	
Chromium	0.003	0.005	**0.018**	mg/L	01/21/16 16:17	200.8	C.F.	
Copper	0.0025	0.005	**0.0673**	mg/L	01/21/16 16:17	200.8	C.F.	
Iron	0.25	0.5	**1.79**	mg/L	01/21/16 16:17	200.8	C.F.	
Lead	0.003	0.005	**0.836**	mg/L	01/21/16 16:17	200.8	C.F.	
Manganese	0.001	0.002	**0.058**	mg/L	01/21/16 16:17	200.8	C.F.	
Nickel	0.003	0.005	**0.021**	mg/L	01/21/16 16:17	200.8	C.F.	
Selenium	0.0025	0.005	**0.0101**	mg/L	01/21/16 16:17	200.8	C.F.	
Silver	0.001	0.001	ND	mg/L	01/21/16 16:17	200.8	C.F.	
Zinc	0.003	0.005	**0.107**	mg/L	01/21/16 16:17	200.8	C.F.	
Digested by method 245.1 on 01/21/16 at 11:45								
Mercury	0.0001	0.0002	**0.0003**	mg/L	01/21/16 15:34	245.1	M.A.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD012016-01**
Oxidor Sample ID: 16010449-005
Sample Received: 1/21/2016

Matrix: **Liquid**
Sample Collected: **1/20/2016 15:05**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	50.0	50	**1540**	mg/L	01/21/16 15:20	SM-2540-C	A.E.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD012016-03**
Oxidor Sample ID: 16010447-005
Sample Received: 1/21/2016
Matrix: **Liquid**
Sample Collected: **1/20/2016 15:05**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Suspended Solids	10.0	10	**232**	mg/L	01/21/16 13:20	SM-2540-D	A.E.	

January 24, 2017 1302086

Brad Weaver
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2016 SECOND QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the second quarter of 2016. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in the previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment and offsite disposal. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the second quarter of 2016 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the second quarter 2016 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the second quarter of 2016.

A more detailed description of the results of data collection activities and inspections is included in Section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20151107/e20161107/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the second quarter of 2016. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary much from the previous reading in 2016 with most wells having a slight decrease in water elevation.

3.3 Floodwall Seepage

At the time of the wall inspection on June 1, 2016 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on June 1, 2016. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during second quarter 2016. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the second quarter of 2016 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Anne Faeth-Boyd

Brett Forthaus
Environmental Engineer

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Apr-16			May-16			Jun-16		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
18,513		**7.01**	**9,351**		**5.37**	**14,056**		**5.57**
Date	**Daily Flow (gal)**	**Daily Precip (in)**	**Date**	**Daily Flow (gal)**	**Daily Precip (in)**	**Date**	**Daily Flow (gal)**	**Daily Precip (in)**
Friday, April 01, 2016	74	0.00	Sunday, May 01, 2016	NR	0.00	Wednesday, June 01, 2016	957	0.00
Saturday, April 02, 2016	NR	0.00	Monday, May 02, 2016	1,147	0.40	Thursday, June 02, 2016	453	2.05
Sunday, April 03, 2016	NR	0.00	Tuesday, May 03, 2016	521	0.00	Friday, June 03, 2016	995	0.00
Monday, April 04, 2016	173	0.00	Wednesday, May 04, 2016	315	0.00	Saturday, June 04, 2016	NR	0.01
Tuesday, April 05, 2016	50	0.00	Thursday, May 05, 2016	174	0.00	Sunday, June 05, 2016	NR	0.00
Wednesday, April 06, 2016	31	0.00	Friday, May 06, 2016	124	0.00	Monday, June 06, 2016	1,085	0.00
Thursday, April 07, 2016	0	0.00	Saturday, May 07, 2016	NR	0.00	Tuesday, June 07, 2016	356	0.00
Friday, April 08, 2016	3	0.00	Sunday, May 08, 2016	NR	0.40	Wednesday, June 08, 2016	250	0.00
Saturday, April 09, 2016	NR	0.01	Monday, May 09, 2016	1,010	0.40	Thursday, June 09, 2016	224	0.00
Sunday, April 10, 2016	NR	0.00	Tuesday, May 10, 2016	450	0.01	Friday, June 10, 2016	149	0.00
Monday, April 11, 2016	230	1.16	Wednesday, May 11, 2016	223	0.00	Saturday, June 11, 2016	NR	0.02
Tuesday, April 12, 2016	1,051	0.00	Thursday, May 12, 2016	253	0.00	Sunday, June 12, 2016	NR	2.44
Wednesday, April 13, 2016	557	0.70	Friday, May 13, 2016	121	0.00	Monday, June 13, 2016	3,142	1.05
Thursday, April 14, 2016	971	0.00	Saturday, May 14, 2016	NR	0.00	Tuesday, June 14, 2016	3,548	0.00
Friday, April 15, 2016	428	0.00	Sunday, May 15, 2016	NR	0.00	Wednesday, June 15, 2016	780	0.00
Saturday, April 16, 2016	NR	0.00	Monday, May 16, 2016	427	0.03	Thursday, June 16, 2016	319	0.00
Sunday, April 17, 2016	NR	1.91	Tuesday, May 17, 2016	337	0.23	Friday, June 17, 2016	369	0.00
Monday, April 18, 2016	785	0.70	Wednesday, May 18, 2016	374	0.10	Saturday, June 18, 2016	NR	0.00
Tuesday, April 19, 2016	1,611	0.00	Thursday, May 19, 2016	453	0.31	Sunday, June 19, 2016	NR	0.00
Wednesday, April 20, 2016	2,472	1.15	Friday, May 20, 2016	332	0.00	Monday, June 20, 2016	501	0.00
Thursday, April 21, 2016	2,437	0.24	Saturday, May 21, 2016	NR	0.00	Tuesday, June 21, 2016	139	0.00
Friday, April 22, 2016	425	0.00	Sunday, May 22, 2016	NR	0.00	Wednesday, June 22, 2016	117	0.00
Saturday, April 23, 2016	NR	0.00	Monday, May 23, 2016	599	0.62	Thursday, June 23, 2016	96	0.00
Sunday, April 24, 2016	NR	0.00	Tuesday, May 24, 2016	437	0.00	Friday, June 24, 2016	96	0.00
Monday, April 25, 2016	623	0.00	Wednesday, May 25, 2016	305	0.00	Saturday, June 25, 2016	NR	0.00
Tuesday, April 26, 2016	379	1.03	Thursday, May 26, 2016	239	0.02	Sunday, June 26, 2016	NR	0.00
Wednesday, April 27, 2016	5,104	0.00	Friday, May 27, 2016	350	0.86	Monday, June 27, 2016	252	0.00
Thursday, April 28, 2016	782	0.00	Saturday, May 28, 2016	NR	0.00	Tuesday, June 28, 2016	84	0.00
Friday, April 29, 2016	327	0.11	Sunday, May 29, 2016	NR	0.43	Wednesday, June 29, 2016	72	0.00
Saturday, April 30, 2016	NR	0.00	Monday, May 30, 2016	NR	0.40	Thursday, June 30, 2016	72	0.00
---	---	---	Tuesday, May 31, 2016	1,160	1.16	---	---	---

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20151107/e20161107/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: BEF 11/07/16
Checked by: KK 11/07/16
Reviewed by: FMB 01/02/17

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26	631.93	5-15	3/11/2013	9.98	621.95
(Groundwater)			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
MW-29	633.51	4.5-14.5	3/11/2013	13.08	620.43
(Groundwater)			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
MW-31	636.71	8-23	5/13/2013	10.58	626.13
(Groundwater)			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
MW-32	630.96	2.5-5	1/21/2014	4.16	626.80
(Perched)			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
MW-33	632.59	2.5-5	1/21/2014	1.09	631.50
(Perched)			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: BEF 11/08/16
Checked by: KK 11/08/16
Reviewed by: FMB 01/02/17

Table 3
French Drain Water
Analytical Data

	Sample ID		**Sample ID**		**Sample ID**	
	FD042216-01		FD042216-02		FD042216-03	
	Date Collected		**Date Collected**		**Date Collected**	
	4/22/2016 9:55		4/22/2016 9:55		4/22/2016 9:55	
Metals						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.005	mg/L	NA	mg/L
Barium	NA	mg/L	0.042	mg/L	NA	mg/L
Cadmium	NA	mg/L	0.0011	mg/L	NA	mg/L
Chromium	NA	mg/L	0.015	mg/L	NA	mg/L
Copper	NA	mg/L	0.0188	mg/L	NA	mg/L
Iron	NA	mg/L	ND	mg/L	NA	mg/L
Lead	NA	mg/L	0.089	mg/L	NA	mg/L
Manganese	NA	mg/L	0.003	mg/L	NA	mg/L
Nickel	NA	mg/L	ND	mg/L	NA	mg/L
Selenium	NA	mg/L	0.0195	mg/L	NA	mg/L
Silver	NA	mg/L	ND	mg/L	NA	mg/L
Zinc	NA	mg/L	0.014	mg/L	NA	mg/L
Mercury	NA	mg/L	ND	mg/L	NA	mg/L
General Chemistry						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	NA	mg/L	NA	mg/L	ND	mg/L
Total Dissolved Solids	1,200	mg/L	NA	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected

Prepared by: BEF 11/07/16
Checked by: KK 11/07/16
Reviewed by: FMB 01/02/17

LEGEND

● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline

50 25 0 50

Feet

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	**1**

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in

0

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: ~~General Permit Outfalls~~

Customer Sample ID: **FD042216-01**
Oxidor Sample ID: 16040629-004
Sample Received: 4/22/2016

Matrix: **Liquid**
Sample Collected: **4/22/2016 09:55**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1200**	mg/L	04/25/16 10:30	SM-2540-C	JD.T.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **General Permit Outfalls**

Customer Sample ID: **FD042216-03**
Oxidor Sample ID: 16040630-004
Sample Received: 4/22/2016
Matrix: **Liquid**
Sample Collected: **4/22/2016 09:55**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Suspended Solids	5.0	5	ND	mg/L	04/25/16 09:15	SM-2540-D	JD.T.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **General Permit Outfalls**

Customer Sample ID: **FD042216-02**
Oxidor Sample ID: 16040628-004
Sample Received: 4/22/2016

Matrix: **Liquid**
Sample Collected: **4/22/2016 09:55**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 04/25/16 at 09:07								
Arsenic	0.003	0.005	**0.005**	mg/L	04/27/16 12:47	200.8	M.A.	
Barium	0.003	0.005	**0.042**	mg/L	04/27/16 12:47	200.8	M.A.	
Cadmium	0.0005	0.001	**0.0011**	mg/L	04/27/16 12:47	200.8	M.A.	
Chromium	0.003	0.005	**0.015**	mg/L	04/27/16 12:47	200.8	M.A.	
Copper	0.0025	0.005	**0.0188**	mg/L	04/27/16 12:47	200.8	M.A.	
Iron	0.25	0.5	ND	mg/L	04/27/16 12:47	200.8	M.A.	
Lead	0.003	0.005	**0.089**	mg/L	04/27/16 12:47	200.8	M.A.	
Manganese	0.001	0.002	**0.003**	mg/L	04/27/16 12:47	200.8	M.A.	
Nickel	0.003	0.005	ND	mg/L	04/27/16 12:47	200.8	M.A.	
Selenium	0.0025	0.005	**0.0195**	mg/L	04/27/16 12:47	200.8	M.A.	
Silver	0.001	0.001	ND	mg/L	04/27/16 12:47	200.8	M.A.	
Zinc	0.003	0.005	**0.014**	mg/L	04/27/16 12:47	200.8	M.A.	
Digested by method 245.1 on 04/25/16 at 09:20								
Mercury	0.0001	0.0002	ND	mg/L	04/25/16 14:26	245.1	D.W.	

January 24, 2017 1302086

Brad Weaver
Exide Technologies
7471 South 5th Street
Frisco, Texas 75034

RE: 2016 THIRD QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 South 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the third quarter of 2016. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment and offsite disposal. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the third quarter of 2016 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the third quarter 2016 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the third quarter of 2016.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20151107/e20161107/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the third quarter of 2016. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary much from previous readings in 2016 with most wells having a slight decrease in water elevation.

3.3 Floodwall Seepage

At the time of the wall inspection on September 8, 2016 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on September 8, 2016. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the third quarter of 2016. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the third quarter of 2016 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly status update.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Brett Forthaus
Environmental Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jul-16			Aug-16			Sep-16		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
7,033		2.93	13,378		3.51	10,457		2.31
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Friday, July 01, 2016	47	0.00	Monday, August 01, 2016	280	0.00	Thursday, September 01, 2016	51	0.57
Saturday, July 02, 2016	NR	0.00	Tuesday, August 02, 2016	46	0.00	Friday, September 02, 2016	134	0.00
Sunday, July 03, 2016	NR	0.00	Wednesday, August 03, 2016	NR	0.00	Saturday, September 03, 2016	NR	0.00
Monday, July 04, 2016	NR	0.60	Thursday, August 04, 2016	NR	0.00	Sunday, September 04, 2016	NR	0.00
Tuesday, July 05, 2016	NR	0.00	Friday, August 05, 2016	154	0.00	Monday, September 05, 2016	NR	0.00
Wednesday, July 06, 2016	1,213	0.00	Saturday, August 06, 2016	NR	0.00	Tuesday, September 06, 2016	NR	0.00
Thursday, July 07, 2016	108	0.00	Sunday, August 07, 2016	NR	0.00	Wednesday, September 07, 2016	621	0.00
Friday, July 08, 2016	59	0.00	Monday, August 08, 2016	145	0.00	Thursday, September 08, 2016	47	0.00
Saturday, July 09, 2016	NR	0.55	Tuesday, August 09, 2016	49	0.00	Friday, September 09, 2016	83	0.00
Sunday, July 10, 2016	NR	0.00	Wednesday, August 10, 2016	41	0.00	Saturday, September 10, 2016	NR	0.47
Monday, July 11, 2016	605	0.00	Thursday, August 11, 2016	38	0.00	Sunday, September 11, 2016	NR	0.00
Tuesday, July 12, 2016	91	0.00	Friday, August 12, 2016	40	0.00	Monday, September 12, 2016	988	0.00
Wednesday, July 13, 2016	503	0.00	Saturday, August 13, 2016	NR	0.00	Tuesday, September 13, 2016	117	0.00
Thursday, July 14, 2016	106	0.00	Sunday, August 14, 2016	NR	0.00	Wednesday, September 14, 2016	39	0.00
Friday, July 15, 2016	282	0.69	Monday, August 15, 2016	110	0.05	Thursday, September 15, 2016	68	0.00
Saturday, July 16, 2016	NR	0.00	Tuesday, August 16, 2016	119	0.00	Friday, September 16, 2016	49	0.00
Sunday, July 17, 2016	NR	0.00	Wednesday, August 17, 2016	50	0.00	Saturday, September 17, 2016	NR	0.00
Monday, July 18, 2016	1,009	0.00	Thursday, August 18, 2016	536	0.26	Sunday, September 18, 2016	NR	0.06
Tuesday, July 19, 2016	102	0.00	Friday, August 19, 2016	410	1.89	Monday, September 19, 2016	241	0.00
Wednesday, July 20, 2016	96	0.00	Saturday, August 20, 2016	NR	1.07	Tuesday, September 20, 2016	449	0.00
Thursday, July 21, 2016	68	0.00	Sunday, August 21, 2016	NR	0.00	Wednesday, September 21, 2016	328	0.00
Friday, July 22, 2016	52	0.00	Monday, August 22, 2016	6,831	0.09	Thursday, September 22, 2016	339	0.00
Saturday, July 23, 2016	NR	0.00	Tuesday, August 23, 2016	NR	0.00	Friday, September 23, 2016	251	0.00
Sunday, July 24, 2016	NR	0.00	Wednesday, August 24, 2016	2,579	0.00	Saturday, September 24, 2016	NR	0.26
Monday, July 25, 2016	NR	0.86	Thursday, August 25, 2016	166	0.00	Sunday, September 25, 2016	NR	0.66
Tuesday, July 26, 2016	306	0.00	Friday, August 26, 2016	74	0.07	Monday, September 26, 2016	743	0.29
Wednesday, July 27, 2016	46	0.22	Saturday, August 27, 2016	NR	0.00	Tuesday, September 27, 2016	1,305	0.00
Thursday, July 28, 2016	2,177	0.00	Sunday, August 28, 2016	NR	0.00	Wednesday, September 28, 2016	2,485	0.00
Friday, July 29, 2016	163	0.01	Monday, August 29, 2016	894	0.08	Thursday, September 29, 2016	2,064	0.00
Saturday, July 30, 2016	NR	0.00	Tuesday, August 30, 2016	654	0.00	Friday, September 30, 2016	55	0.00
Sunday, July 31, 2016	NR	0.00	Wednesday, August 31, 2016	162	0.00	---	---	---

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20151107/e20161107/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: BEF 11/07/16
Checked by: KK 11/09/16
Reviewed by: FMB 01/02/17

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Survey Point	**Measurement Date**	**Elevation (ft msl)**
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Creek Centerline	3/7/2016	622.79
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Top of South Bank	3/7/2016	634.09
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Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: BEF 11/09/16
Checked by: KK 11/09/16
Reviewed by: FMB 01/02/17

Table 3
French Drain Water
Analytical Data

	Sample ID FD071216-01		**Sample ID** FD071216-02		**Sample ID** FD071216-03	
	Date Collected 7/12/2016 12:20		**Date Collected** 7/12/2016 12:20		**Date Collected** 7/12/2016 12:20	
Metals						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.007	mg/L	NA	mg/L
Barium	NA	mg/L	0.070	mg/L	NA	mg/L
Cadmium	NA	mg/L	0.0010	mg/L	NA	mg/L
Chromium	NA	mg/L	0.015	mg/L	NA	mg/L
Copper	NA	mg/L	0.0218	mg/L	NA	mg/L
Iron	NA	mg/L	ND	mg/L	NA	mg/L
Lead	NA	mg/L	0.065	mg/L	NA	mg/L
Manganese	NA	mg/L	0.001	mg/L	NA	mg/L
Nickel	NA	mg/L	ND	mg/L	NA	mg/L
Selenium	NA	mg/L	0.0145	mg/L	NA	mg/L
Silver	NA	mg/L	ND	mg/L	NA	mg/L
Zinc	NA	mg/L	0.011	mg/L	NA	mg/L
Mercury	NA	mg/L	ND	mg/L	NA	mg/L
General Chemistry						
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	NA	mg/L	NA	mg/L	ND	mg/L
Total Dissolved Solids	1,340	mg/L	NA	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: BEF 11/09/16
Checked by: KK 11/09/16
Reviewed by: FMB 01/02/17

LEGEND

● Transect Location
⊕ Monitoring Well Location
🟩 French Drain
🟥 Flood Wall
— Approximate Creek Centerline

50 25 0 50
Feet

NOTE(S)
1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)
1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT

Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in
0

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Grab Samples from process**

Customer Sample ID: **FD071216-03**
Oxidor Sample ID: 16070374-004
Sample Received: 7/13/2016

Matrix: **Liquid**
Sample Collected: **7/12/2016 12:20**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Suspended Solids	5.0	5	ND	mg/L	07/18/16 15:05	SM-2540-D	K.E.L.	*

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Grab Samples from process**

Customer Sample ID: **FD071216-01**
Oxidor Sample ID: 16070375-004
Sample Received: 7/13/2016

Matrix: **Liquid**
Sample Collected: **7/12/2016 12:20**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1340**	mg/L	07/18/16 17:45	SM-2540-C	K.E.L.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **Grab Samples from process**

Customer Sample ID: **FD071216-02**
Oxidor Sample ID: 16070376-004
Sample Received: 7/13/2016

Matrix: **Liquid**
Sample Collected: **7/12/2016 12:20**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 07/15/16 at 08:48								
Arsenic	0.003	0.005	**0.007**	mg/L	07/15/16 17:32	200.8	M.A.	
Barium	0.003	0.005	**0.070**	mg/L	07/15/16 17:32	200.8	M.A.	
Cadmium	0.0005	0.001	**0.0010**	mg/L	07/15/16 17:32	200.8	M.A.	
Chromium	0.003	0.005	**0.015**	mg/L	07/15/16 17:32	200.8	M.A.	
Copper	0.0025	0.005	**0.0218**	mg/L	07/15/16 17:32	200.8	M.A.	
Iron	0.25	0.5	ND	mg/L	07/15/16 17:32	200.8	M.A.	
Lead	0.003	0.005	**0.065**	mg/L	07/18/16 17:27	200.8	M.A.	
Manganese	0.001	0.002	**0.001**	mg/L	07/15/16 17:32	200.8	M.A.	J-5
Nickel	0.003	0.005	ND	mg/L	07/15/16 17:32	200.8	M.A.	
Selenium	0.0025	0.005	**0.0145**	mg/L	07/15/16 17:32	200.8	M.A.	
Silver	0.001	0.001	ND	mg/L	07/15/16 17:32	200.8	M.A.	
Zinc	0.003	0.005	**0.011**	mg/L	07/15/16 17:32	200.8	M.A.	
Digested by method 245.1 on 07/15/16 at 08:50								
Mercury	0.0001	0.0002	ND	mg/L	07/15/16 15:24	245.1	D.W.	

February 17, 2017 1302086

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2016 FOURTH QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the fourth quarter of 2016. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to the wastewater treatment system for treatment and offsite disposal. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the fourth quarter of 2016 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading. There were no readings collected Monday December 19th through Friday December 30th due to a scheduled holiday period at the Site.

- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the fourth quarter 2016 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the fourth quarter of 2016.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/tdata/s20160201/e20170201/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the fourth quarter of 2016. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary much from previous readings in 2016 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on December 2, 2016 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on December 2, 2016. As such, no samples of white crystalline material were collected or analyzed. A white powdery material was observed on the ground between the Stewart Creek and the wall during the inspection. After further investigation and confirmation with Site personnel, it was determined that the powdery material was not related to seepage from the flood wall and therefore no samples of the material were collected.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the fourth quarter of 2016. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the fourth quarter of 2016 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Brett Forthaus
Environmental Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Oct-16			Nov-16			Dec-16		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
7,864		2.81	14,870		3.01	4,237		0.77
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Saturday, October 01, 2016	NR	0.00	Tuesday, November 01, 2016	68	0.00	Thursday, December 01, 2016	90	0.00
Sunday, October 02, 2016	NR	0.00	Wednesday, November 02, 2016	19	0.00	Friday, December 02, 2016	72	0.03
Monday, October 03, 2016	12	0.00	Thursday, November 03, 2016	196	1.09	Saturday, December 03, 2016	NR	0.51
Tuesday, October 04, 2016	8	0.00	Friday, November 04, 2016	339	0.01	Sunday, December 04, 2016	NR	0.01
Wednesday, October 05, 2016	23	0.00	Saturday, November 05, 2016	NR	0.03	Monday, December 05, 2016	2,059	0.11
Thursday, October 06, 2016	75	0.00	Sunday, November 06, 2016	NR	0.23	Tuesday, December 06, 2016	872	0.01
Friday, October 07, 2016	1,598	1.73	Monday, November 07, 2016	156	1.28	Wednesday, December 07, 2016	333	0.00
Saturday, October 08, 2016	NR	0.00	Tuesday, November 08, 2016	4,537	0.06	Thursday, December 08, 2016	NR	0.00
Sunday, October 09, 2016	NR	0.00	Wednesday, November 09, 2016	2,827	0.01	Friday, December 09, 2016	NR	0.00
Monday, October 10, 2016	14	0.00	Thursday, November 10, 2016	2,429	0.00	Saturday, December 10, 2016	NR	0.00
Tuesday, October 11, 2016	3,481	0.00	Friday, November 11, 2016	550	0.00	Sunday, December 11, 2016	NR	0.00
Wednesday, October 12, 2016	278	0.00	Saturday, November 12, 2016	NR	0.00	Monday, December 12, 2016	558	0.00
Thursday, October 13, 2016	153	0.00	Sunday, November 13, 2016	NR	0.00	Tuesday, December 13, 2016	74	0.00
Friday, October 14, 2016	87	0.00	Monday, November 14, 2016	917	0.00	Wednesday, December 14, 2016	78	0.00
Saturday, October 15, 2016	NR	0.00	Tuesday, November 15, 2016	178	0.00	Thursday, December 15, 2016	46	0.01
Sunday, October 16, 2016	NR	0.00	Wednesday, November 16, 2016	150	0.00	Friday, December 16, 2016	55	0.00
Monday, October 17, 2016	219	0.00	Thursday, November 17, 2016	120	0.00	Saturday, December 17, 2016	NR	0.00
Tuesday, October 18, 2016	74	0.00	Friday, November 18, 2016	319	0.02	Sunday, December 18, 2016	NR	0.00
Wednesday, October 19, 2016	62	0.00	Saturday, November 19, 2016	NR	0.00	Monday, December 19, 2016	NR	0.00
Thursday, October 20, 2016	642	1.07	Sunday, November 20, 2016	NR	0.00	Tuesday, December 20, 2016	NR	0.00
Friday, October 21, 2016	374	0.00	Monday, November 21, 2016	361	0.00	Wednesday, December 21, 2016	NR	0.00
Saturday, October 22, 2016	NR	0.00	Tuesday, November 22, 2016	70	0.07	Thursday, December 22, 2016	NR	0.00
Sunday, October 23, 2016	NR	0.00	Wednesday, November 23, 2016	309	0.00	Friday, December 23, 2016	NR	0.05
Monday, October 24, 2016	260	0.00	Thursday, November 24, 2016	NR	0.00	Saturday, December 24, 2016	NR	0.04
Tuesday, October 25, 2016	314	0.01	Friday, November 25, 2016	NR	0.00	Sunday, December 25, 2016	NR	0.00
Wednesday, October 26, 2016	61	0.00	Saturday, November 26, 2016	NR	0.00	Monday, December 26, 2016	NR	0.00
Thursday, October 27, 2016	19	0.00	Sunday, November 27, 2016	NR	0.00	Tuesday, December 27, 2016	NR	0.00
Friday, October 28, 2016	24	0.00	Monday, November 28, 2016	929	0.21	Wednesday, December 28, 2016	NR	0.00
Saturday, October 29, 2016	NR	0.00	Tuesday, November 29, 2016	264	0.00	Thursday, December 29, 2016	NR	0.00
Sunday, October 30, 2016	NR	0.00	Wednesday, November 30, 2016	132	0.00	Friday, December 30, 2016	NR	0.00
Monday, October 31, 2016	86	0.00	---	---	---	Saturday, December 31, 2016	NR	0.00

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/tdata/s20160201/e20170201/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: BEF 02/01/17
Checked by: KK 02/03/17
Reviewed by: AMF/FMB 02/09/17

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations

Survey Point	Measurement Date	Elevation (ft msl)
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26	631.93	5-15	3/11/2013	9.98	621.95
(Groundwater)			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
MW-29	633.51	4.5-14.5	3/11/2013	13.08	620.43
(Groundwater)			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
MW-31	636.71	8-23	5/13/2013	10.58	626.13
(Groundwater)			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
MW-32	630.96	2.5-5	1/21/2014	4.16	626.80
(Perched)			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: BEF 02/01/17
Checked by: KK 02/03/17
Reviewed by: AMF/FMB 02/09/17

Table 3
French Drain Water
Analytical Data

	Sample ID		Sample ID		Sample ID		Sample ID		Sample ID		Sample ID		Sample ID	
	FD100716-01		FD100716-02		FD100716-03		FD100716-04		FD100716-05		FD100716-06		FD100716-07	
	Date Collected		Date Collected		Date Collected		Date Collected		Date Collected		Date Collected		Date Collected	
	10/7/2016 11:00		10/7/2016 11:00		10/7/2016 11:00		10/7/2016 11:00		10/7/2016 11:00		10/7/2016 11:00		10/7/2016 11:00	
Metals														
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	0.055	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	0.010	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Barium	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Cadmium	0.0018	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Chromium	0.018	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Copper	0.0370	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Iron	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Lead	0.055	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Manganese	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Nickel	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Selenium	0.0128	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Silver	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Zinc	0.008	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Mercury	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
General Chemistry														
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Cyanide, Total	NA	mg/L	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Phenols	NA	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Biochemical Oxygen Demand	NA	mg/L	NA	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Total Suspended Solids	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	5.0	mg/L	NA	mg/L	NA	mg/L
Ammonia - N	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	ND	mg/L	NA	mg/L
Chloride	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	24.7	mg/L
Sulfate	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	509	mg/L
Total Dissolved Solids	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	810	mg/L

Notes:

1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: BEF 02/01/17
Checked by: KK 02/07/17
Reviewed by: AMF/FMB 02/09/17

LEGEND

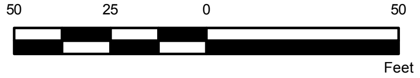
● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline



NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0
1 in

OXIDOR Laboratories

Friday, October 14, 2016

Exide Technologies
Eduardo Salazar
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: French Drain

Oxidor received 7 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
16100276-001	FD 100716-01	Liquid	10/7/2016 11:00	Antimony, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Zinc
16100276-002	FD 100716-02	Liquid	10/7/2016 11:00	Cyanide, Total
16100276-003	FD 100716-03	Liquid	10/7/2016 11:00	Phenols
16100276-004	FD 100716-04	Liquid	10/7/2016 11:00	Biochemical Oxygen Demand
16100276-005	FD 100716-05	Liquid	10/7/2016 11:00	Total Suspended Solids
16100276-006	FD 100716-06	Liquid	10/7/2016 11:00	Ammonia - N
16100276-007	FD 100716-07	Liquid	10/7/2016 11:00	Chloride, Sulfate, Total Dissolved Solids

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-01**
Oxidor Sample ID: 16100276-001
Sample Received: 10/7/2016
Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 10/10/16 at 09:00								
Antimony	0.003	0.005	**0.055**	mg/L	10/10/16 14:38	200.8	M.A.	
Arsenic	0.003	0.005	**0.010**	mg/L	10/10/16 14:38	200.8	M.A.	
Cadmium	0.0005	0.001	**0.0018**	mg/L	10/10/16 14:38	200.8	M.A.	
Chromium	0.003	0.005	**0.018**	mg/L	10/10/16 14:38	200.8	M.A.	
Copper	0.0025	0.005	**0.0370**	mg/L	10/10/16 14:38	200.8	M.A.	
Lead	0.003	0.005	**0.055**	mg/L	10/10/16 14:38	200.8	M.A.	
Nickel	0.003	0.005	ND	mg/L	10/10/16 14:38	200.8	M.A.	
Selenium	0.0025	0.005	**0.0128**	mg/L	10/10/16 14:38	200.8	M.A.	
Silver	0.001	0.001	ND	mg/L	10/10/16 14:38	200.8	M.A.	
Zinc	0.003	0.005	**0.008**	mg/L	10/10/16 14:38	200.8	M.A.	
Digested by method 245.1 on 10/10/16 at 09:00								
Mercury	0.0001	0.0002	ND	mg/L	10/10/16 14:14	245.1	I.Z.	

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Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-02**
Oxidor Sample ID: 16100276-002
Matrix: **Liquid**
Sample Received: 10/7/2016
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Cyanide, Total	0.01	0.02	ND	mg/L	10/10/16 10:00	SM-4500-CN C,E	A.T.	

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Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-03**
Oxidor Sample ID: 16100276-003
Sample Received: 10/7/2016
Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Phenols	0.005	0.005	ND	mg/L	10/10/16 11:00	420.1	B.F.	

Exide Technologies
Eduardo Salazar

Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-04**
Oxidor Sample ID: 16100276-004
Sample Received: 10/7/2016
Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Biochemical Oxygen Demand	2.0	2	ND	mg/L	10/07/16 15:30	SM-5210-B	K.E.L.	

Analysis started 4.50 hours after sample collection.

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Eduardo Salazar

Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-05**
Oxidor Sample ID: 16100276-005
Sample Received: 10/7/2016

Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Suspended Solids	5.0	5	**5.0**	mg/L	10/11/16 15:00	SM-2540-D	W.S.	

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Eduardo Salazar

Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-06**
Oxidor Sample ID: 16100276-006
Sample Received: 10/7/2016
Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Ammonia - N	0.20	0.2	ND	mg/L	10/11/16 11:00	SM-4500-NH3 D	B.F.	

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Analytical Report

Project Name: **French Drain**

Customer Sample ID: **FD 100716-07**
Oxidor Sample ID: 16100276-007
Sample Received: 10/7/2016
Matrix: **Liquid**
Sample Collected: **10/7/2016 11:00**

Parameter	MQL	SQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Chloride	10.0	1	**24.7**	mg/L	10/07/16 20:54	300.0	P.C.	Dx10
Sulfate	10.0	1	**509**	mg/L	10/07/16 20:54	300.0	P.C.	Dx10
Total Dissolved Solids	20.0	25	**810**	mg/L	10/07/16 16:30	SM-2540-C	W.S.	

Exide Technologies
Eduardo Salazar

Sample Cross Reference

Project Name: **French Drain**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD 100716-01	16100276-001	Mercury	245.1	MERC_06135_L
		Zinc	200.8	META_10364_L
		Arsenic	200.8	META_10364_L
		Cadmium	200.8	META_10364_L
		Chromium	200.8	META_10364_L
		Copper	200.8	META_10364_L
		Lead	200.8	META_10364_L
		Nickel	200.8	META_10364_L
		Antimony	200.8	META_10364_L
		Silver	200.8	META_10364_L
		Selenium	200.8	META_10364_L
FD 100716-02	16100276-002	Cyanide, Total	SM-4500-CN C,E	CYAN_00523_L
FD 100716-03	16100276-003	Phenols	420.1	PHEN_05120_L
FD 100716-04	16100276-004	Biochemical Oxygen Demand	SM-5210-B	BOD__08255_L
FD 100716-05	16100276-005	Total Suspended Solids	SM-2540-D	TSS__05832_L
FD 100716-06	16100276-006	Ammonia - N	SM-4500-NH3 D	AMM__06640_L
FD 100716-07	16100276-007	Chloride	300.0	IC___01219_L
		Sulfate	300.0	IC___01219_L
		Total Dissolved Solids	SM-2540-C	TDS__04022_L

Exide Technologies
Eduardo Salazar

QC Summary

Project Name: **French Drain**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**AMM__06640_L**								
Blank	Ammonia - N	ND mg/L							
LCS	Ammonia - N	1.95 mg/L		1.96 mg/L	100%	90-110%			
LCSD	Ammonia - N	1.96 mg/L		1.96 mg/L	100%	90-110%	0.5%	0-20%	
MS	Ammonia - N	1.93 mg/L	ND	1.96 mg/L	99%	80-120%			
MSD	Ammonia - N	2.09 mg/L	ND	1.96 mg/L	107%	80-120%	8.0%	0-20%	
QCBatchID	**BOD__08255_L**								
Blank	Biochemical Oxygen Demand	ND mg/L							
LCS	Biochemical Oxygen Demand	200 mg/L		198 mg/L	101%	85-115%			
Replicate	Biochemical Oxygen Demand	ND mg/L	ND				0.0%	0-20%	
QCBatchID	**CYAN_00523_L**								
Blank	Cyanide, Total	ND mg/L							
LCS	Cyanide, Total	0.19 mg/L		0.2 mg/L	96%	90-110%			
LCSD	Cyanide, Total	0.19 mg/L		0.2 mg/L	95%	90-110%	0.5%	0-20%	
MS	Cyanide, Total	0.19 mg/L	ND	0.2 mg/L	97%	80-120%			
MSD	Cyanide, Total	0.19 mg/L	ND	0.2 mg/L	96%	80-120%	0.5%	0-20%	
QCBatchID	**IC___01219_L**								
Blank	Chloride	ND mg/L							
	Sulfate	ND mg/L							
LCS	Chloride	2.72 mg/L		3 mg/L	91%	90-110%			
	Sulfate	13.8 mg/L		15 mg/L	92%	90-110%			
LCSD	Chloride	2.70 mg/L		3 mg/L	90%	90-110%	0.7%	0-20%	
	Sulfate	14.0 mg/L		15 mg/L	94%	90-110%	1.6%	0-20%	
MS	Chloride	2.73 mg/L	0.26 mg/L	3 mg/L	82%	80-120%			
	Sulfate	13.4 mg/L	ND	15 mg/L	90%	80-120%			
MSD	Chloride	2.75 mg/L	0.26 mg/L	3 mg/L	83%	80-120%	0.7%	0-20%	
	Sulfate	13.9 mg/L	ND	15 mg/L	93%	80-120%	3.5%	0-20%	
QCBatchID	**PHEN_05120_L**								
Blank	Phenols	ND mg/L							
LCS	Phenols	0.097 mg/L		0.1 mg/L	97%	90-110%			
LCSD	Phenols	0.096 mg/L		0.1 mg/L	96%	90-110%	1.0%	0-20%	
MS	Phenols	0.097 mg/L	ND	0.1 mg/L	97%	80-120%			
MSD	Phenols	0.098 mg/L	ND	0.1 mg/L	98%	80-120%	1.0%	0-20%	
QCBatchID	**TDS__04022_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	975 mg/L		1000 mg/L	98%	90-110%			
LCSD	Total Dissolved Solids	980 mg/L		1000 mg/L	98%	90-110%	0.5%	0-5%	
Replicate	Total Dissolved Solids	1140 mg/L	1140 mg/L				0.4%	0-5%	

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QC Summary

Project Name: **French Drain**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TSS__05832_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	473 mg/L		500 mg/L	95%	85-115%			
LCSD	Total Suspended Solids	480 mg/L		500 mg/L	96%	85-115%	1.5%	0-15%	
Replicate	Total Suspended Solids	84.0 mg/L	80.0 mg/L				4.9%	0-15%	
QCBatchID	**MERC_06135_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0051 mg/L		0.005 mg/L	102%	85-115%			
LCSD	Mercury	0.0049 mg/L		0.005 mg/L	97%	85-115%	4.6%	0-25%	
MS	Mercury	0.0044 mg/L	ND	0.005 mg/L	88%	80-120%			
MSD	Mercury	0.0050 mg/L	ND	0.005 mg/L	99%	80-120%	12.2%	0-25%	
QCBatchID	**META_10364_L**								
Blank	Antimony	ND mg/L							
	Arsenic	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Lead	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Antimony	0.525 mg/L		0.5 mg/L	105%	85-115%			
	Arsenic	0.514 mg/L		0.5 mg/L	103%	85-115%			
	Cadmium	0.5227 mg/L		0.5 mg/L	105%	85-115%			
	Chromium	0.537 mg/L		0.5 mg/L	107%	85-115%			
	Copper	0.5345 mg/L		0.5 mg/L	107%	85-115%			
	Lead	0.517 mg/L		0.5 mg/L	103%	85-115%			
	Nickel	0.511 mg/L		0.5 mg/L	102%	85-115%			
	Selenium	0.5243 mg/L		0.5 mg/L	105%	85-115%			
	Silver	0.547 mg/L		0.5 mg/L	109%	85-115%			
	Zinc	0.529 mg/L		0.5 mg/L	106%	85-115%			
LCSD	Antimony	0.527 mg/L		0.5 mg/L	105%	85-115%	0.4%	0-20%	
	Arsenic	0.521 mg/L		0.5 mg/L	104%	85-115%	1.4%	0-20%	
	Cadmium	0.5239 mg/L		0.5 mg/L	105%	85-115%	0.2%	0-20%	
	Chromium	0.533 mg/L		0.5 mg/L	107%	85-115%	0.7%	0-20%	
	Copper	0.5374 mg/L		0.5 mg/L	108%	85-115%	0.5%	0-20%	
	Lead	0.517 mg/L		0.5 mg/L	103%	85-115%	0.0%	0-20%	
	Nickel	0.504 mg/L		0.5 mg/L	101%	85-115%	1.4%	0-20%	
	Selenium	0.5238 mg/L		0.5 mg/L	105%	85-115%	0.1%	0-20%	
	Silver	0.534 mg/L		0.5 mg/L	107%	85-115%	2.4%	0-20%	
	Zinc	0.525 mg/L		0.5 mg/L	105%	85-115%	0.7%	0-20%	
MS	Antimony	0.513 mg/L	0.003 mg/L	0.5 mg/L	102%	80-120%			

Exide Technologies
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QC Summary

Project Name: **French Drain**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_10364_L**								
	Arsenic	0.512 mg/L	ND	0.5 mg/L	102%	80-120%			
	Cadmium	0.5053 mg/L	ND	0.5 mg/L	101%	80-120%			
	Chromium	0.531 mg/L	ND	0.5 mg/L	106%	80-120%			
	Copper	0.5371 mg/L	0.0147 mg/L	0.5 mg/L	105%	80-120%			
	Lead	0.511 mg/L	ND	0.5 mg/L	102%	80-120%			
	Nickel	0.507 mg/L	ND	0.5 mg/L	101%	80-120%			
	Selenium	0.5144 mg/L	ND	0.5 mg/L	103%	80-120%			
	Silver	0.527 mg/L	ND	0.5 mg/L	105%	80-120%			
	Zinc	0.544 mg/L	0.036 mg/L	0.5 mg/L	102%	80-120%			
MSD	Antimony	0.515 mg/L	0.003 mg/L	0.5 mg/L	102%	80-120%	0.4%	0-20%	
	Arsenic	0.511 mg/L	ND	0.5 mg/L	102%	80-120%	0.2%	0-20%	
	Cadmium	0.5030 mg/L	ND	0.5 mg/L	101%	80-120%	0.5%	0-20%	
	Chromium	0.530 mg/L	ND	0.5 mg/L	106%	80-120%	0.2%	0-20%	
	Copper	0.5334 mg/L	0.0147 mg/L	0.5 mg/L	104%	80-120%	0.7%	0-20%	
	Lead	0.518 mg/L	ND	0.5 mg/L	104%	80-120%	1.4%	0-20%	
	Nickel	0.508 mg/L	ND	0.5 mg/L	102%	80-120%	0.2%	0-20%	
	Selenium	0.5081 mg/L	ND	0.5 mg/L	102%	80-120%	1.2%	0-20%	
	Silver	0.521 mg/L	ND	0.5 mg/L	104%	80-120%	1.1%	0-20%	
	Zinc	0.547 mg/L	0.036 mg/L	0.5 mg/L	102%	80-120%	0.5%	0-20%	

Exide Technologies
Eduardo Salazar

Case Narrative

Project Name: **French Drain**

Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Eduardo Salazar

Sample Preservation Verification

Project Name: **French Drain**

Receipt temp: **3.0 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD 100716-01**
Oxidor Sample ID: **16100276-001**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **FD 100716-02**
Oxidor Sample ID: **16100276-002**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		NaOH	>12

Customer Sample ID: **FD 100716-03**
Oxidor Sample ID: **16100276-003**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
500 mL Amber	1	Grab		H2SO4	<2

Customer Sample ID: **FD 100716-04**
Oxidor Sample ID: **16100276-004**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Customer Sample ID: **FD 100716-05**
Oxidor Sample ID: **16100276-005**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		None	-

Exide Technologies
Eduardo Salazar

Sample Preservation Verification

Project Name: **French Drain**

Customer Sample ID: **FD 100716-06**
Oxidor Sample ID: **16100276-006**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		H2SO4	<2

Customer Sample ID: **FD 100716-07**
Oxidor Sample ID: **16100276-007**
Collected: **10/07/16 11:00**
Collected By: **Ramon Dimas**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

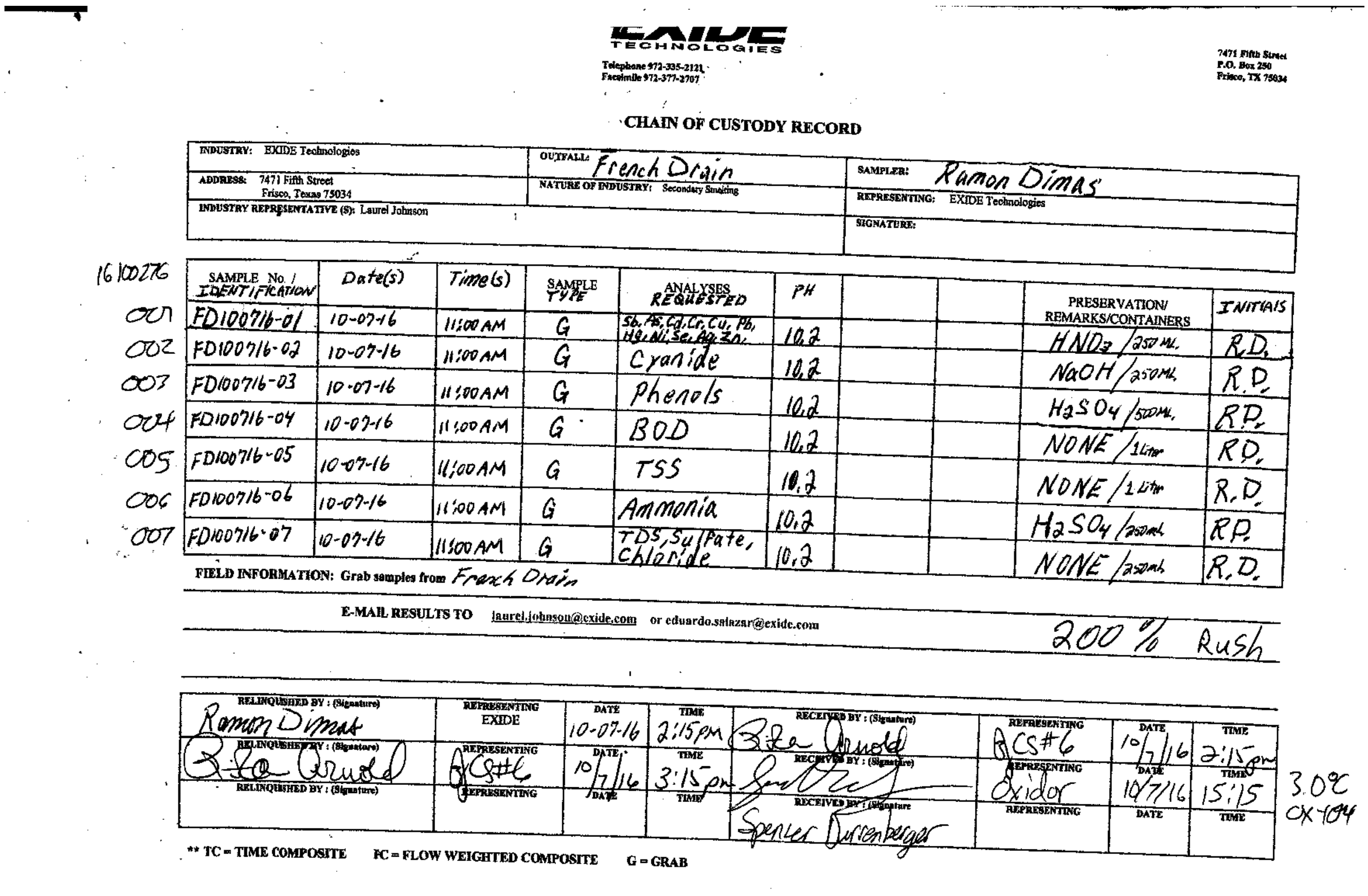
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		None	-

Sample conditions at time of receipt at laboratory verified in part or in whole by:

S.D.

Documentation

PROJECT DESCRIPTION: **French Drain**



EXIDE TECHNOLOGIES
Telephone 972-335-2121
Facsimile 972-377-2707

7471 Fifth Street
P.O. Box 250
Frisco, TX 75034

CHAIN OF CUSTODY RECORD

INDUSTRY: EXIDE Technologies
ADDRESS: 7471 Fifth Street
Frisco, Texas 75034
INDUSTRY REPRESENTATIVE (S): Laurel Johnson
OUTFALL: French Drain
NATURE OF INDUSTRY: Secondary Smelting
SAMPLER: Ramon Dimas
REPRESENTING: EXIDE Technologies
SIGNATURE:

16100276

	SAMPLE No. / IDENTIFICATION	Date(s)	Time(s)	SAMPLE TYPE	ANALYSES REQUESTED	PH			PRESERVATION/ REMARKS/CONTAINERS	INITIALS
001	FD100716-01	10-07-16	11:00 AM	G	Sb, As, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Zn,	10.2			HNO3 / 250 ML.	R.D.
002	FD100716-02	10-07-16	11:00 AM	G	Cyanide	10.2			NaOH / 250ML.	R.D.
003	FD100716-03	10-07-16	11:00 AM	G	Phenols	10.2			H2SO4 / 500ML.	R.D.
004	FD100716-04	10-07-16	11:00 AM	G	BOD	10.2			NONE / 1Liter	R.D.
005	FD100716-05	10-07-16	11:00 AM	G	TSS	10.2			NONE / 1 Liter	R.D.
006	FD100716-06	10-07-16	11:00 AM	G	Ammonia	10.2			H2SO4 / 250mL	R.D.
007	FD100716-07	10-07-16	11:00 AM	G	TDS, Sulfate, Chloride	10.2			NONE / 250mL	R.D.

FIELD INFORMATION: Grab samples from French Drain

E-MAIL RESULTS TO laurel.johnson@exide.com or eduardo.salazar@exide.com

200 % Rush

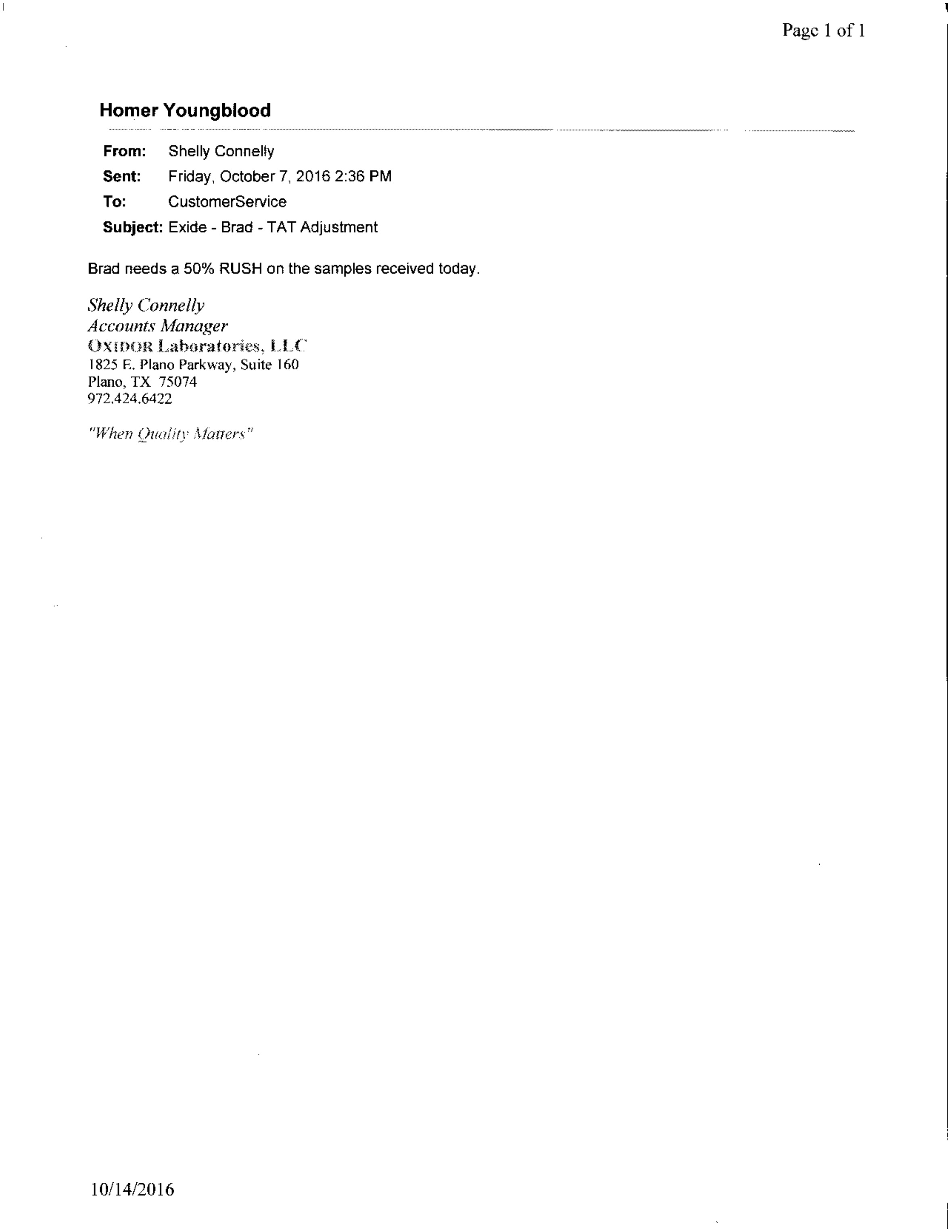
RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Ramon Dimas	EXIDE	10-07-16	2:15PM	Rita Arnold	ACS#6	10/7/16	2:15pm
Rita Arnold	ACS#6	10/7/16	3:15pm		Oxidor	10/7/16	15:15
				Spencer Dursenberger			

3.0°C
CX-104

** TC = TIME COMPOSITE FC = FLOW WEIGHTED COMPOSITE G = GRAB

Documentation

PROJECT DESCRIPTION: **French Drain**



Page 1 of 1

Homer Youngblood

From: Shelly Connelly
Sent: Friday, October 7, 2016 2:36 PM
To: CustomerService
Subject: Exide - Brad - TAT Adjustment

Brad needs a 50% RUSH on the samples received today.

Shelly Connelly
Accounts Manager
OXIDOR Laboratories, LLC
1825 E. Plano Parkway, Suite 160
Plano, TX 75074
972.424.6422

"When Quality Matters"

10/14/2016

April 28, 2017 1302086

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2017 FIRST QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the first quarter of 2017. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, is included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the first quarter of 2017 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.

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- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the first quarter 2017 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the first quarter of 2017.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160331/e20170401/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the first quarter of 2017. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary much from previous readings in 2016 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on March 2, 2017 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on March 2, 2017. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the first quarter of 2017. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the first quarter of 2017 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Anne Faeth-Boyd

Brett Forthaus
Environmental Engineer

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jan-17			Feb-17			Mar-17		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
10,141		3.17	8,442		3.04	4,626		1.49
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Sunday, January 01, 2017	NR	0.04	Wednesday, February 01, 2017	116	0.00	Wednesday, March 01, 2017	332	0.00
Monday, January 02, 2017	NR	0.51	Thursday, February 02, 2017	89	0.00	Thursday, March 02, 2017	79	0.00
Tuesday, January 03, 2017	2,835	0.00	Friday, February 03, 2017	59	0.00	Friday, March 03, 2017	31	0.00
Wednesday, January 04, 2017	282	0.00	Saturday, February 04, 2017	NR	0.00	Saturday, March 04, 2017	NR	0.04
Thursday, January 05, 2017	NR	0.00	Sunday, February 05, 2017	NR	0.00	Sunday, March 05, 2017	NR	0.09
Friday, January 06, 2017	NR	0.00	Monday, February 06, 2017	206	0.00	Monday, March 06, 2017	884	0.00
Saturday, January 07, 2017	NR	0.00	Tuesday, February 07, 2017	66	0.00	Tuesday, March 07, 2017	292	0.22
Sunday, January 08, 2017	NR	0.00	Wednesday, February 08, 2017	95	0.00	Wednesday, March 08, 2017	193	0.00
Monday, January 09, 2017	201	0.00	Thursday, February 09, 2017	78	0.00	Thursday, March 09, 2017	177	0.00
Tuesday, January 10, 2017	159	0.00	Friday, February 10, 2017	91	0.00	Friday, March 10, 2017	123	0.00
Wednesday, January 11, 2017	61	0.00	Saturday, February 11, 2017	NR	0.00	Saturday, March 11, 2017	NR	0.00
Thursday, January 12, 2017	59	0.00	Sunday, February 12, 2017	NR	0.00	Sunday, March 12, 2017	NR	0.00
Friday, January 13, 2017	68	0.27	Monday, February 13, 2017	180	0.15	Monday, March 13, 2017	356	0.00
Saturday, January 14, 2017	NR	0.01	Tuesday, February 14, 2017	NR	1.42	Tuesday, March 14, 2017	133	0.00
Sunday, January 15, 2017	NR	1.77	Wednesday, February 15, 2017	1,765	0.00	Wednesday, March 15, 2017	NR	0.00
Monday, January 16, 2017	654	0.02	Thursday, February 16, 2017	2,697	0.00	Thursday, March 16, 2017	132	0.00
Tuesday, January 17, 2017	1,892	0.21	Friday, February 17, 2017	740	0.00	Friday, March 17, 2017	19	0.00
Wednesday, January 18, 2017	829	0.14	Saturday, February 18, 2017	NR	0.00	Saturday, March 18, 2017	NR	0.00
Thursday, January 19, 2017	470	0.00	Sunday, February 19, 2017	NR	0.00	Sunday, March 19, 2017	NR	0.00
Friday, January 20, 2017	388	0.00	Monday, February 20, 2017	NR	0.80	Monday, March 20, 2017	227	0.00
Saturday, January 21, 2017	NR	0.20	Tuesday, February 21, 2017	1,326	0.01	Tuesday, March 21, 2017	87	0.00
Sunday, January 22, 2017	NR	0.00	Wednesday, February 22, 2017	43	0.00	Wednesday, March 22, 2017	43	0.00
Monday, January 23, 2017	1,047	0.00	Thursday, February 23, 2017	30	0.00	Thursday, March 23, 2017	86	0.00
Tuesday, January 24, 2017	336	0.00	Friday, February 24, 2017	35	0.00	Friday, March 24, 2017	117	0.31
Wednesday, January 25, 2017	209	0.00	Saturday, February 25, 2017	NR	0.00	Saturday, March 25, 2017	NR	0.00
Thursday, January 26, 2017	145	0.00	Sunday, February 26, 2017	NR	0.48	Sunday, March 26, 2017	NR	0.29
Friday, January 27, 2017	118	0.00	Monday, February 27, 2017	616	0.18	Monday, March 27, 2017	701	0.00
Saturday, January 28, 2017	NR	0.00	Tuesday, February 28, 2017	210	0.00	Tuesday, March 28, 2017	143	0.00
Sunday, January 29, 2017	NR	0.00	---	---	---	Wednesday, March 29, 2017	17	0.54
Monday, January 30, 2017	301	0.00	---	---	---	Thursday, March 30, 2017	309	0.00
Tuesday, January 31, 2017	87	0.00	---	---	---	Friday, March 31, 2017	145	0.00

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160331/e20170401/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: TJG 04/06/2017
Checked by: BEF 04/10/2017
Reviewed by: AMF 04/12/2017

Table 2

Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: TJG 04/06/2017
Checked by: BEF 04/06/2017
Reviewed by: AMF 04/12/2017

Table 3
French Drain Water
Analytical Data

	Sample ID FD030217-02 **Date Collected** 3/2/2017 14:50		**Sample ID** FD030217-02 **Date Collected** 3/3/2017 14:50	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.005	mg/L
Barium	NA	mg/L	0.036	mg/L
Cadmium	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.010	mg/L
Copper	NA	mg/L	0.0096	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.015	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0121	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.009	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	1.8	mg/L	NA	mg/L
Total Dissolved Solids	1,320	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: TJG 04/06/2017
Checked by: BEF 04/06/2017
Reviewed by: AMF 04/12/2017

LEGEND

● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT

Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 1 in

OXIDOR Laboratories

Friday, March 10, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples

Oxidor received 2 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17030115-001	FD030217-02	Liquid	3/2/2017 14:50	Total Dissolved Solids, Total Suspended Solids
17030115-002	FD030217-02	Liquid	3/3/2017 14:50	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD030217-02**
Oxidor Sample ID: 17030115-001
Sample Received: 3/3/2017
Matrix: **Liquid**
Sample Collected: **3/2/2017 14:50**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1320**	mg/L	03/09/17 16:12	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**1.8**	mg/L	03/07/17 09:50	SM-2540-D	K.E.L.	J-5

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD030217-02**
Oxidor Sample ID: 17030115-002
Sample Received: 3/3/2017

Matrix: **Liquid**
Sample Collected: **3/3/2017 14:50**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 03/06/17 at 08:48								
Arsenic	0.003	0.005	**0.005**	mg/L	03/06/17 15:48	200.8	M.A.	
Barium	0.003	0.005	**0.036**	mg/L	03/06/17 15:48	200.8	M.A.	
Cadmium	0.0005	0.001	ND	mg/L	03/06/17 15:48	200.8	M.A.	
Chromium	0.003	0.005	**0.010**	mg/L	03/06/17 15:48	200.8	M.A.	
Copper	0.0025	0.005	**0.0096**	mg/L	03/06/17 15:48	200.8	M.A.	
Iron	0.25	0.5	ND	mg/L	03/06/17 15:48	200.8	M.A.	
Lead	0.003	0.005	**0.015**	mg/L	03/06/17 15:48	200.8	M.A.	
Manganese	0.001	0.002	ND	mg/L	03/06/17 15:48	200.8	M.A.	
Nickel	0.003	0.005	ND	mg/L	03/06/17 15:48	200.8	M.A.	
Selenium	0.0025	0.005	**0.0121**	mg/L	03/06/17 15:48	200.8	M.A.	
Silver	0.0005	0.001	ND	mg/L	03/06/17 15:48	200.8	M.A.	
Zinc	0.003	0.005	**0.009**	mg/L	03/06/17 15:48	200.8	M.A.	
Digested by method 245.1 on 03/07/17 at 09:08								
Mercury	0.0001	0.0002	ND	mg/L	03/07/17 15:37	245.1	I.Z.	

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Sample Cross Reference

Project Name: **Raw Grab Samples**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD030217-02	17030115-001	Total Dissolved Solids	SM-2540-C	TDS__02623_L
		Total Suspended Solids	SM-2540-D	TSS__06933_L
FD030217-02	17030115-002	Mercury	245.1	MERC_05937_L
		Zinc	200.8	META_03067_L
		Silver	200.8	META_03067_L
		Selenium	200.8	META_03067_L
		Nickel	200.8	META_03067_L
		Manganese	200.8	META_03067_L
		Lead	200.8	META_03067_L
		Iron	200.8	META_03067_L
		Copper	200.8	META_03067_L
		Chromium	200.8	META_03067_L
		Cadmium	200.8	META_03067_L
		Barium	200.8	META_03067_L
		Arsenic	200.8	META_03067_L

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QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__02623_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	980 mg/L		1000 mg/L	98%	90-110%			
LCSD	Total Dissolved Solids	960 mg/L		1000 mg/L	96%	90-110%	2.1%	0-5%	
Replicate	Total Dissolved Solids	1320 mg/L	1320 mg/L				0.4%	0-5%	
QCBatchID	**TSS__06933_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	441 mg/L		500 mg/L	88%	85-115%			
LCSD	Total Suspended Solids	455 mg/L		500 mg/L	91%	85-115%	3.1%	0-15%	
Replicate	Total Suspended Solids	12.0 mg/L	13.0 mg/L				8.0%	0-15%	
QCBatchID	**MERC_05937_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0048 mg/L		0.005 mg/L	95%	85-115%			
LCSD	Mercury	0.0048 mg/L		0.005 mg/L	96%	85-115%	0.0%	0-25%	
MS	Mercury	0.0048 mg/L	ND	0.005 mg/L	96%	80-120%			
MSD	Mercury	0.0047 mg/L	ND	0.005 mg/L	94%	80-120%	2.1%	0-25%	
QCBatchID	**META_03067_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.099 mg/L		0.1 mg/L	99%	85-115%			
	Barium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	Cadmium	0.1011 mg/L		0.1 mg/L	101%	85-115%			
	Chromium	0.101 mg/L		0.1 mg/L	101%	85-115%			
	Copper	0.1011 mg/L		0.1 mg/L	101%	85-115%			
	Iron	10.9 mg/L		10.1 mg/L	108%	85-115%			
	Lead	0.098 mg/L		0.1 mg/L	98%	85-115%			
	Manganese	0.098 mg/L		0.1 mg/L	98%	85-115%			
	Nickel	0.099 mg/L		0.1 mg/L	99%	85-115%			
	Selenium	0.1007 mg/L		0.1 mg/L	101%	85-115%			
	Silver	0.106 mg/L		0.1 mg/L	106%	85-115%			
	Zinc	0.100 mg/L		0.1 mg/L	100%	85-115%			
LCSD	Arsenic	0.101 mg/L		0.1 mg/L	101%	85-115%	2.0%	0-20%	
	Barium	0.104 mg/L		0.1 mg/L	104%	85-115%	1.9%	0-20%	

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QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_03067_L**								
	Cadmium	0.1027 mg/L		0.1 mg/L	103%	85-115%	1.6%	0-20%	
	Chromium	0.101 mg/L		0.1 mg/L	101%	85-115%	0.0%	0-20%	
	Copper	0.1009 mg/L		0.1 mg/L	101%	85-115%	0.2%	0-20%	
	Iron	10.9 mg/L		10.1 mg/L	108%	85-115%	0.0%	0-20%	
	Lead	0.099 mg/L		0.1 mg/L	99%	85-115%	1.0%	0-20%	
	Manganese	0.099 mg/L		0.1 mg/L	99%	85-115%	1.0%	0-20%	
	Nickel	0.099 mg/L		0.1 mg/L	99%	85-115%	0.0%	0-20%	
	Selenium	0.1049 mg/L		0.1 mg/L	105%	85-115%	4.1%	0-20%	
	Silver	0.106 mg/L		0.1 mg/L	106%	85-115%	0.0%	0-20%	
	Zinc	0.101 mg/L		0.1 mg/L	101%	85-115%	1.0%	0-20%	
MS	Arsenic	0.517 mg/L	0.005 mg/L	0.5 mg/L	102%	80-120%			
	Barium	0.528 mg/L	0.019 mg/L	0.5 mg/L	102%	80-120%			
	Cadmium	0.5089 mg/L	0.0010 mg/L	0.5 mg/L	102%	80-120%			
	Chromium	0.513 mg/L	0.001 mg/L	0.5 mg/L	102%	80-120%			
	Copper	0.5180 mg/L	0.008 mg/L	0.5 mg/L	102%	80-120%			
	Iron	54.7 mg/L	0.094 mg/L	50.5 mg/L	108%	80-120%			
	Lead	0.520 mg/L	0.024 mg/L	0.5 mg/L	99%	80-120%			
	Manganese	0.500 mg/L	0.005 mg/L	0.5 mg/L	99%	80-120%			
	Nickel	0.496 mg/L	0.001 mg/L	0.5 mg/L	99%	80-120%			
	Selenium	0.5091 mg/L	0.005 mg/L	0.5 mg/L	101%	80-120%			
	Silver	0.522 mg/L	ND	0.5 mg/L	104%	80-120%			
	Zinc	0.517 mg/L	0.005 mg/L	0.5 mg/L	102%	80-120%			
MSD	Arsenic	0.503 mg/L	0.005 mg/L	0.5 mg/L	100%	80-120%	2.7%	0-20%	
	Barium	0.528 mg/L	0.019 mg/L	0.5 mg/L	102%	80-120%	0.0%	0-20%	
	Cadmium	0.5058 mg/L	0.0010 mg/L	0.5 mg/L	101%	80-120%	0.6%	0-20%	
	Chromium	0.507 mg/L	0.001 mg/L	0.5 mg/L	101%	80-120%	1.2%	0-20%	
	Copper	0.5031 mg/L	0.008 mg/L	0.5 mg/L	99%	80-120%	2.9%	0-20%	
	Iron	55.2 mg/L	0.094 mg/L	50.5 mg/L	109%	80-120%	0.9%	0-20%	
	Lead	0.517 mg/L	0.024 mg/L	0.5 mg/L	99%	80-120%	0.6%	0-20%	
	Manganese	0.492 mg/L	0.005 mg/L	0.5 mg/L	97%	80-120%	1.6%	0-20%	
	Nickel	0.488 mg/L	0.001 mg/L	0.5 mg/L	97%	80-120%	1.6%	0-20%	
	Selenium	0.5024 mg/L	0.005 mg/L	0.5 mg/L	100%	80-120%	1.3%	0-20%	
	Silver	0.526 mg/L	ND	0.5 mg/L	105%	80-120%	0.8%	0-20%	
	Zinc	0.501 mg/L	0.005 mg/L	0.5 mg/L	99%	80-120%	3.1%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples**

Receipt temp: **1.8 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD030217-02**
Oxidor Sample ID: **17030115-001**
Collected: **03/02/17 14:50**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD030217-02**
Oxidor Sample ID: **17030115-002**
Collected: **03/03/17 14:50**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

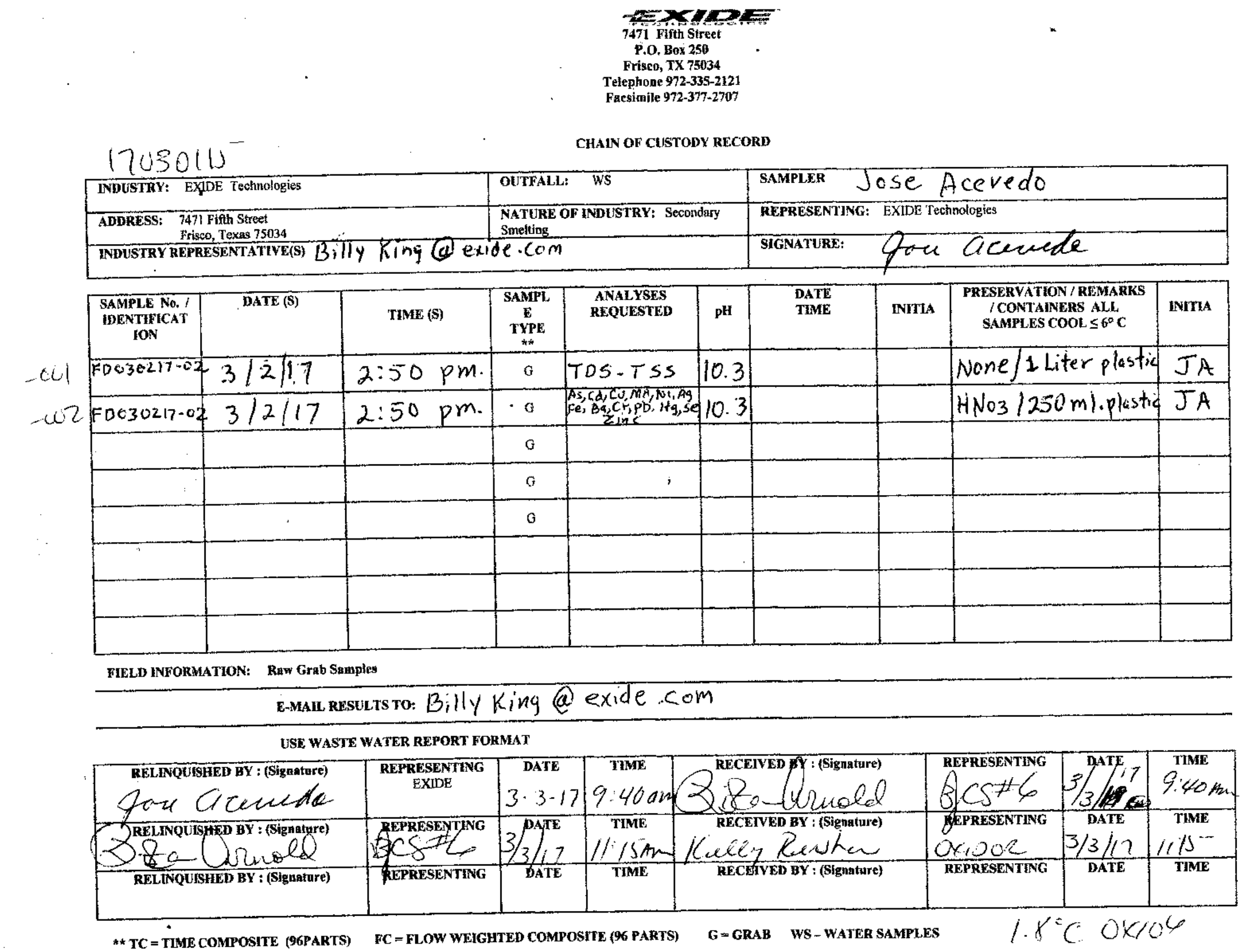
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

K.R.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples**



EXIDE
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

1703011D

INDUSTRY: EXIDE Technologies	OUTFALL: WS	SAMPLER Jose Acevedo
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	NATURE OF INDUSTRY: Secondary Smelting	REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE(S) Billy King @ exide.com		SIGNATURE: Jose Acevedo

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIA	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIA
-001	FD030217-02	3/2/17	2:50 pm.	G	TDS - TSS	10.3			None / 1 Liter plastic	JA
-002	FD030217-02	3/2/17	2:50 pm.	G	As, Cd, Cu, Mn, Ni, Ag Fe, Ba, Cr, Pb, Hg, Se Zinc	10.3			HNO3 / 250 ml. plastic	JA
				G						
				G						
				G						

FIELD INFORMATION: Raw Grab Samples

E-MAIL RESULTS TO: Billy King @ exide .com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	3-3-17	9:40am	Bito Arnold	BCS#6	3/3/17	9:40 am
RELINQUISHED BY : (Signature)	**REPRESENTING**	**DATE**	**TIME**	**RECEIVED BY : (Signature)**	**REPRESENTING**	**DATE**	**TIME**
Bito Arnold	BCS#6	3/3/17	11:15Am	Kelly Rusher	OXIDOR	3/3/17	11:15
RELINQUISHED BY : (Signature)	**REPRESENTING**	**DATE**	**TIME**	**RECEIVED BY : (Signature)**	**REPRESENTING**	**DATE**	**TIME**

** TC = TIME COMPOSITE (96PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB WS - WATER SAMPLES

1.8°C OX104

August 21, 2017 1302086

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2017 SECOND QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the second quarter of 2017. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the second quarter of 2017 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the second quarter 2017 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the second quarter of 2017.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the second quarter of 2017. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in first quarter 2017 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on May 4, 2017 no seepage from the flood wall was observed. The flood wall waterstops and joint fillers were generally in good condition. No major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on May 4, 2017. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the second quarter of 2017. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the second quarter of 2017 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Brett Forthaus

Brett Forthaus
Environmental Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

BEF/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Apr-17			May-17			Jun-17		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
948		3.49	492		0.54	1,313		5.05
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Saturday, April 01, 2017	NR	0.00	Monday, May 01, 2017	46	0.00	Thursday, June 01, 2017	5	0.06
Sunday, April 02, 2017	NR	1.06	Tuesday, May 02, 2017	10	0.00	Friday, June 02, 2017	8	1.65
Monday, April 03, 2017	103	0.00	Wednesday, May 03, 2017	15	0.00	Saturday, June 03, 2017	NR	0.32
Tuesday, April 04, 2017	30	0.00	Thursday, May 04, 2017	15	0.00	Sunday, June 04, 2017	NR	0.00
Wednesday, April 05, 2017	25	0.02	Friday, May 05, 2017	14	0.00	Monday, June 05, 2017	282	0.15
Thursday, April 06, 2017	16	0.00	Saturday, May 06, 2017	NR	0.00	Tuesday, June 06, 2017	35	0.01
Friday, April 07, 2017	17	0.01	Sunday, May 07, 2017	NR	0.00	Wednesday, June 07, 2017	24	0.00
Saturday, April 08, 2017	NR	0.00	Monday, May 08, 2017	24	0.00	Thursday, June 08, 2017	27	0.00
Sunday, April 09, 2017	NR	0.00	Tuesday, May 09, 2017	9	0.00	Friday, June 09, 2017	63	0.99
Monday, April 10, 2017	31	0.79	Wednesday, May 10, 2017	9	0.00	Saturday, June 10, 2017	NR	0.00
Tuesday, April 11, 2017	259	0.57	Thursday, May 11, 2017	9	0.00	Sunday, June 11, 2017	NR	0.00
Wednesday, April 12, 2017	42	0.00	Friday, May 12, 2017	5	0.00	Monday, June 12, 2017	93	0.00
Thursday, April 13, 2017	30	0.00	Saturday, May 13, 2017	NR	0.00	Tuesday, June 13, 2017	31	0.00
Friday, April 14, 2017	NR	0.00	Sunday, May 14, 2017	NR	0.00	Wednesday, June 14, 2017	NR	0.00
Saturday, April 15, 2017	NR	0.00	Monday, May 15, 2017	17	0.00	Thursday, June 15, 2017	69	0.00
Sunday, April 16, 2017	NR	0.00	Tuesday, May 16, 2017	5	0.00	Friday, June 16, 2017	16	0.00
Monday, April 17, 2017	65	0.21	Wednesday, May 17, 2017	22	0.12	Saturday, June 17, 2017	NR	0.00
Tuesday, April 18, 2017	58	0.00	Thursday, May 18, 2017	7	0.00	Sunday, June 18, 2017	NR	0.00
Wednesday, April 19, 2017	35	0.00	Friday, May 19, 2017	18	0.00	Monday, June 19, 2017	51	0.02
Thursday, April 20, 2017	19	0.00	Saturday, May 20, 2017	NR	0.05	Tuesday, June 20, 2017	43	0.00
Friday, April 21, 2017	16	0.31	Sunday, May 21, 2017	NR	0.03	Wednesday, June 21, 2017	35	0.00
Saturday, April 22, 2017	NR	0.00	Monday, May 22, 2017	107	0.12	Thursday, June 22, 2017	22	0.00
Sunday, April 23, 2017	NR	0.00	Tuesday, May 23, 2017	30	0.13	Friday, June 23, 2017	78	0.00
Monday, April 24, 2017	102	0.00	Wednesday, May 24, 2017	28	0.00	Saturday, June 24, 2017	NR	1.72
Tuesday, April 25, 2017	18	0.00	Thursday, May 25, 2017	29	0.00	Sunday, June 25, 2017	NR	0.00
Wednesday, April 26, 2017	21	0.18	Friday, May 26, 2017	17	0.00	Monday, June 26, 2017	255	0.00
Thursday, April 27, 2017	39	0.00	Saturday, May 27, 2017	NR	0.00	Tuesday, June 27, 2017	54	0.13
Friday, April 28, 2017	22	0.00	Sunday, May 28, 2017	NR	0.09	Wednesday, June 28, 2017	46	0.00
Saturday, April 29, 2017	NR	0.32	Monday, May 29, 2017	NR	0.00	Thursday, June 29, 2017	44	0.00
Sunday, April 30, 2017	NR	0.02	Tuesday, May 30, 2017	44	0.00	Friday, June 30, 2017	32	0.00
---	---	---	Wednesday, May 31, 2017	12	0.00	---	---	---

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: KRK 07/17/2017
Checked by: BCW 07/20/2017
Reviewed by: AMF/FMB 8/20/2017

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-29	633.51	4.5-14.5	3/11/2013	13.08	620.43
(Groundwater)			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
MW-31	636.71	8-23	5/13/2013	10.58	626.13
(Groundwater)			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
MW-32	630.96	2.5-5	1/21/2014	4.16	626.80
(Perched)			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: KRK 07/18/2017
Checked by: BCW 07/20/2017
Reviewed by: AMF/FMB 08/20/2017

Table 3
French Drain Water
Analytical Data

	Sample ID FD050217-02		**Sample ID** FD050217-02	
	Laboratory ID 17050046-001		**Laboratory ID** 17050046-002	
	Date Collected 5/2/2017 9:30		**Date Collected** 5/2/2017 9:30	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.004	mg/L
Barium	NA	mg/L	0.058	mg/L
Cadmium	NA	mg/L	0.0006	mg/L
Chromium	NA	mg/L	0.012	mg/L
Copper	NA	mg/L	0.0100	mg/L
Iron	NA	mg/L	0.30	mg/L
Lead	NA	mg/L	0.022	mg/L
Manganese	NA	mg/L	0.002	mg/L
Nickel	NA	mg/L	0.003	mg/L
Selenium	NA	mg/L	0.0126	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.020	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	ND	mg/L	NA	mg/L
Total Dissolved Solids	1,170	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: KRK 07/18/2017
Checked by: BCW 07/20/2017
Reviewed by: AMF/FMB 08/20/2017

LEGEND

● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline

50 25 0 50

Feet

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT

Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 1 in

OXIDOR Laboratories

Wednesday, May 10, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Grab Samples Quarterly

Oxidor received 2 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17050046-001	FD050217-02	Liquid	5/2/2017 09:30	Total Dissolved Solids, Total Suspended Solids
17050046-002	FD050217-02	Liquid	5/2/2017 09:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Grab Samples Quarterly**

Customer Sample ID: **FD050217-02**
Oxidor Sample ID: 17050046-001
Matrix: **Liquid**
Sample Received: 5/2/2017
Sample Collected: **5/2/2017 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1170**	mg/L	05/08/17 16:45	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	ND	mg/L	05/03/17 11:05	SM-2540-D	K.E.L.	

Exide Technologies
Billy King

Analytical Report

Project Name: **Grab Samples Quarterly**

Customer Sample ID: **FD050217-02**
Oxidor Sample ID: 17050046-002 Matrix: **Liquid**
Sample Received: 5/2/2017 Sample Collected: **5/2/2017 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 05/03/17 at 08:31								
Arsenic	0.003	0.005	**0.004**	mg/L	05/03/17 16:56	200.8	M.A.	J-5
Barium	0.003	0.005	**0.058**	mg/L	05/03/17 16:56	200.8	M.A.	
Cadmium	0.0005	0.001	**0.0006**	mg/L	05/03/17 16:56	200.8	M.A.	J-5
Chromium	0.003	0.005	**0.012**	mg/L	05/03/17 16:56	200.8	M.A.	
Copper	0.0025	0.005	**0.0100**	mg/L	05/03/17 16:56	200.8	M.A.	
Iron	0.25	0.5	**0.30**	mg/L	05/03/17 16:56	200.8	M.A.	J-5
Lead	0.003	0.005	**0.022**	mg/L	05/03/17 16:56	200.8	M.A.	
Manganese	0.001	0.002	**0.002**	mg/L	05/03/17 16:56	200.8	M.A.	
Nickel	0.003	0.005	**0.003**	mg/L	05/03/17 16:56	200.8	M.A.	J-5
Selenium	0.0025	0.005	**0.0126**	mg/L	05/03/17 16:56	200.8	M.A.	
Silver	0.001	0.001	ND	mg/L	05/03/17 16:56	200.8	M.A.	
Zinc	0.003	0.005	**0.020**	mg/L	05/03/17 16:56	200.8	M.A.	
Digested by method 245.1 on 05/03/17 at 09:00								
Mercury	0.0001	0.0002	ND	mg/L	05/03/17 15:07	245.1	G.B.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD050217-02	17050046-001	Total Dissolved Solids	SM-2540-C	TDS__04723_L
		Total Suspended Solids	SM-2540-D	TSS__02334_L
FD050217-02	17050046-002	Mercury	245.1	MERC_01838_L
		Zinc	200.8	META_00968_L
		Silver	200.8	META_00968_L
		Selenium	200.8	META_00968_L
		Nickel	200.8	META_00968_L
		Manganese	200.8	META_00968_L
		Lead	200.8	META_00968_L
		Iron	200.8	META_00968_L
		Copper	200.8	META_00968_L
		Chromium	200.8	META_00968_L
		Cadmium	200.8	META_00968_L
		Barium	200.8	META_00968_L
		Arsenic	200.8	META_00968_L

Exide Technologies
Billy King

QC Summary

Project Name: **Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__04723_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	910 mg/L		1000 mg/L	91%	90-110%			
LCSD	Total Dissolved Solids	940 mg/L		1000 mg/L	94%	90-110%	3.2%	0-5%	
Replicate	Total Dissolved Solids	2850 mg/L	2910 mg/L				2.1%	0-5%	
QCBatchID	**TSS__02334_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	479 mg/L		500 mg/L	96%	85-115%			
LCSD	Total Suspended Solids	481 mg/L		500 mg/L	96%	85-115%	0.4%	0-15%	
Replicate	Total Suspended Solids	82.0 mg/L	84.0 mg/L				2.4%	0-15%	
QCBatchID	**MERC_01838_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0047 mg/L		0.005 mg/L	95%	85-115%			
LCSD	Mercury	0.0046 mg/L		0.005 mg/L	93%	85-115%	1.3%	0-25%	
MS	Mercury	0.0047 mg/L	ND	0.005 mg/L	94%	80-120%			
MSD	Mercury	0.0047 mg/L	ND	0.005 mg/L	94%	80-120%	0.2%	0-25%	
QCBatchID	**META_00968_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.495 mg/L		0.5 mg/L	99%	85-115%			
	Barium	0.515 mg/L		0.5 mg/L	103%	85-115%			
	Cadmium	0.5098 mg/L		0.5 mg/L	102%	85-115%			
	Chromium	0.518 mg/L		0.5 mg/L	104%	85-115%			
	Copper	0.5093 mg/L		0.5 mg/L	102%	85-115%			
	Iron	51.8 mg/L		50.5 mg/L	103%	85-115%			
	Lead	0.493 mg/L		0.5 mg/L	99%	85-115%			
	Manganese	0.486 mg/L		0.5 mg/L	97%	85-115%			
	Nickel	0.509 mg/L		0.5 mg/L	102%	85-115%			
	Selenium	0.5245 mg/L		0.5 mg/L	105%	85-115%			
	Silver	0.524 mg/L		0.5 mg/L	105%	85-115%			
	Zinc	0.511 mg/L		0.5 mg/L	102%	85-115%			
LCSD	Arsenic	0.494 mg/L		0.5 mg/L	99%	85-115%	0.2%	0-20%	
	Barium	0.530 mg/L		0.5 mg/L	106%	85-115%	2.9%	0-20%	

Exide Technologies
Billy King

QC Summary

Project Name: **Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_00968_L**								
	Cadmium	0.5107 mg/L		0.5 mg/L	102%	85-115%	0.2%	0-20%	
	Chromium	0.513 mg/L		0.5 mg/L	103%	85-115%	1.0%	0-20%	
	Copper	0.5018 mg/L		0.5 mg/L	100%	85-115%	1.5%	0-20%	
	Iron	50.6 mg/L		50.5 mg/L	100%	85-115%	2.3%	0-20%	
	Lead	0.503 mg/L		0.5 mg/L	101%	85-115%	2.0%	0-20%	
	Manganese	0.486 mg/L		0.5 mg/L	97%	85-115%	0.0%	0-20%	
	Nickel	0.510 mg/L		0.5 mg/L	102%	85-115%	0.2%	0-20%	
	Selenium	0.5307 mg/L		0.5 mg/L	106%	85-115%	1.2%	0-20%	
	Silver	0.523 mg/L		0.5 mg/L	105%	85-115%	0.2%	0-20%	
	Zinc	0.507 mg/L		0.5 mg/L	101%	85-115%	0.8%	0-20%	
MS	Arsenic	0.491 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%			
	Barium	0.544 mg/L	0.017 mg/L	0.5 mg/L	105%	80-120%			
	Cadmium	0.5130 mg/L	ND	0.5 mg/L	103%	80-120%			
	Chromium	0.503 mg/L	0.006 mg/L	0.5 mg/L	99%	80-120%			
	Copper	0.5272 mg/L	0.005 mg/L	0.5 mg/L	104%	80-120%			
	Iron	50.1 mg/L	0.87 mg/L	50.5 mg/L	98%	80-120%			
	Lead	0.502 mg/L	0.001 mg/L	0.5 mg/L	100%	80-120%			
	Manganese	0.495 mg/L	0.018 mg/L	0.5 mg/L	95%	80-120%			
	Nickel	0.504 mg/L	0.004 mg/L	0.5 mg/L	100%	80-120%			
	Selenium	0.5177 mg/L	0.001 mg/L	0.5 mg/L	103%	80-120%			
	Silver	0.524 mg/L	ND	0.5 mg/L	105%	80-120%			
	Zinc	0.686 mg/L	0.198 mg/L	0.5 mg/L	98%	80-120%			
MSD	Arsenic	0.489 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%	0.4%	0-20%	
	Barium	0.525 mg/L	0.017 mg/L	0.5 mg/L	102%	80-120%	3.6%	0-20%	
	Cadmium	0.5051 mg/L	ND	0.5 mg/L	101%	80-120%	1.6%	0-20%	
	Chromium	0.512 mg/L	0.006 mg/L	0.5 mg/L	101%	80-120%	1.8%	0-20%	
	Copper	0.5024 mg/L	0.005 mg/L	0.5 mg/L	100%	80-120%	4.8%	0-20%	
	Iron	50.9 mg/L	0.87 mg/L	50.5 mg/L	99%	80-120%	1.6%	0-20%	
	Lead	0.493 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%	1.8%	0-20%	
	Manganese	0.497 mg/L	0.018 mg/L	0.5 mg/L	96%	80-120%	0.4%	0-20%	
	Nickel	0.503 mg/L	0.004 mg/L	0.5 mg/L	100%	80-120%	0.2%	0-20%	
	Selenium	0.5200 mg/L	0.001 mg/L	0.5 mg/L	104%	80-120%	0.4%	0-20%	
	Silver	0.528 mg/L	ND	0.5 mg/L	106%	80-120%	0.8%	0-20%	
	Zinc	0.688 mg/L	0.198 mg/L	0.5 mg/L	98%	80-120%	0.3%	0-20%	

Exide Technologies
Billy King

Case Narrative

Project Name: **Grab Samples Quarterly**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Grab Samples Quarterly**

Receipt temp: **1.3 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD050217-02**
Oxidor Sample ID: **17050046-001**
Collected: **05/02/17 09:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD050217-02**
Oxidor Sample ID: **17050046-002**
Collected: **05/02/17 09:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

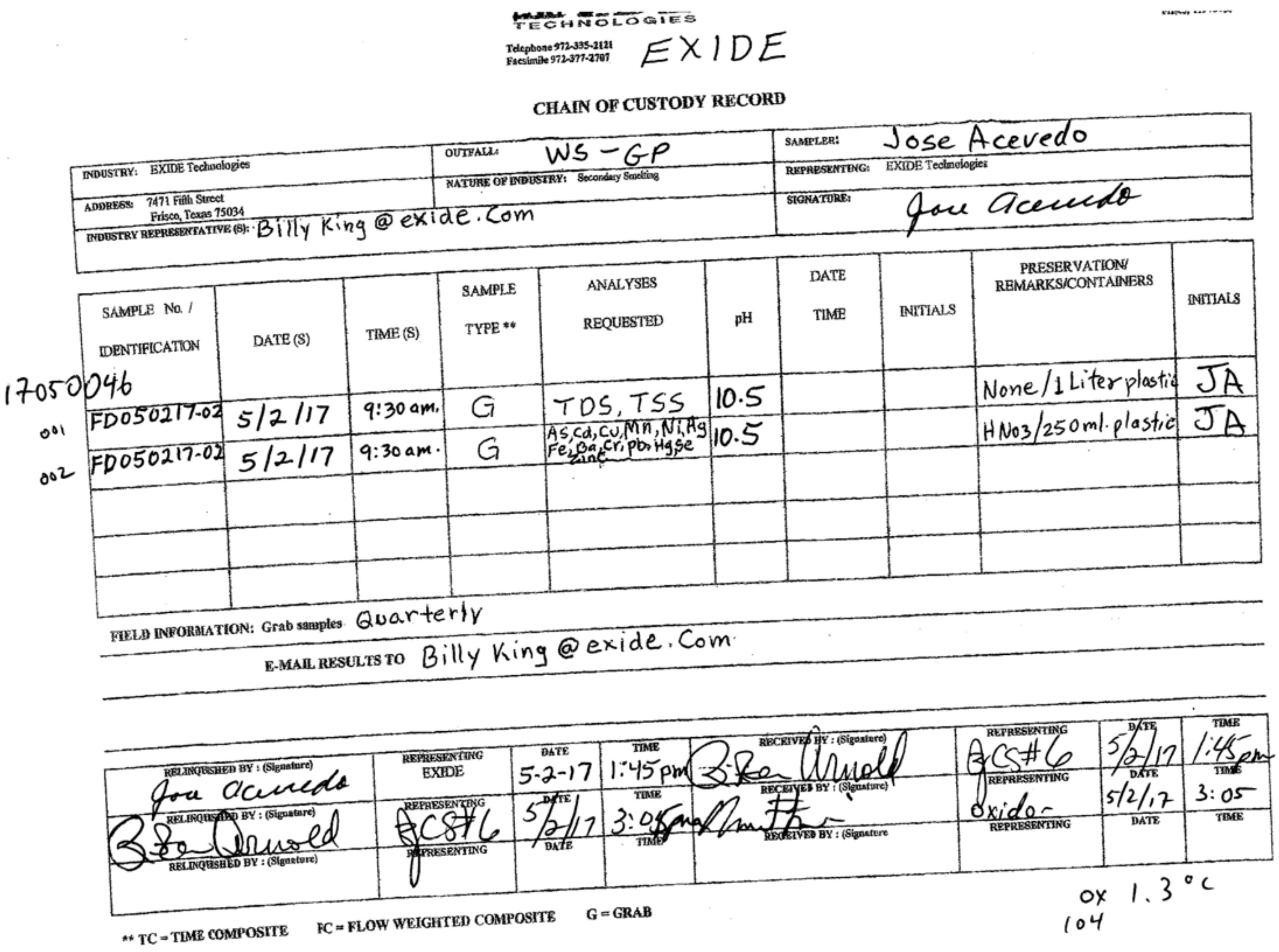
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Grab Samples Quarterly**



TECHNOLOGIES
Telephone 972-335-2121
Facsimile 972-377-2707

EXIDE

CHAIN OF CUSTODY RECORD

INDUSTRY: EXIDE Technologies
ADDRESS: 7471 Fifth Street
Frisco, Texas 75034
INDUSTRY REPRESENTATIVE (S): Billy King @ exide.Com
OUTFALL: WS - GP
NATURE OF INDUSTRY: Secondary Smelting
SAMPLER: Jose Acevedo
REPRESENTING: EXIDE Technologies
SIGNATURE: Joe Acevedo

17050046

SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION/ REMARKS/CONTAINERS	INITIALS
001 FD050217-02	5/2/17	9:30 am.	G	TDS, TSS	10.5			None/1 Liter plastic	JA
002 FD050217-02	5/2/17	9:30 am.	G	As, Cd, Cu, Mn, Ni, Ag Fe, Ba, Cr, Pb, Hg, Se Zinc	10.5			HNo3/250ml. plastic	JA

FIELD INFORMATION: Grab samples Quarterly

E-MAIL RESULTS TO Billy King @ exide.Com

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Joe Acevedo	EXIDE	5-2-17	1:45pm		ACS#6	5/2/17	1:45pm
	ACS#6	5/2/17	3:05pm		Oxidor	5/2/17	3:05

ox 1.3 °c
104

** TC = TIME COMPOSITE FC = FLOW WEIGHTED COMPOSITE G = GRAB

November 30, 2017 1302086

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2017 THIRD QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the third quarter of 2017. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the third quarter of 2017 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the third quarter 2017 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the third quarter of 2017.

A more detailed description of the results of data collection activities and inspections is included in Section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the third quarter of 2017. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in second quarter 2017 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on August 28, 2017 cracks were observed at the apex of the floodwall. Exide was notified of the damage and repairs were made as needed. No seepage from the floodwall was observed. The floodwall waterstops and joint fillers were generally in good condition and no major cracks were observed with the exception as noted above.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on August 28, 2017. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the third quarter of 2017. Analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the third quarter of 2017 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Emily White

Emily White
Staff Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

EPW/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jul-17			Aug-17			Sep-17		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
21,130		3.96	19,180		4.61	4,040		0.25
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Saturday, July 01, 2017	NR	0.78	Tuesday, August 01, 2017	70	0.52	Friday, September 01, 2017	350	0.00
Sunday, July 02, 2017	NR	0.00	Wednesday, August 02, 2017	1,390	0.02	Saturday, September 02, 2017	NR	0.00
Monday, July 03, 2017	1,530	0.02	Thursday, August 03, 2017	910	0.00	Sunday, September 03, 2017	NR	0.00
Tuesday, July 04, 2017	NR	0.87	Friday, August 04, 2017	730	0.00	Monday, September 04, 2017	NR	0.00
Wednesday, July 05, 2017	1,120	0.25	Saturday, August 05, 2017	NR	0.00	Tuesday, September 05, 2017	270	0.00
Thursday, July 06, 2017	5,940	0.00	Sunday, August 06, 2017	NR	0.05	Wednesday, September 06, 2017	50	0.00
Friday, July 07, 2017	1,150	0.00	Monday, August 07, 2017	1,540	0.00	Thursday, September 07, 2017	60	0.00
Saturday, July 08, 2017	NR	0.00	Tuesday, August 08, 2017	260	0.00	Friday, September 08, 2017	60	0.00
Sunday, July 09, 2017	NR	0.12	Wednesday, August 09, 2017	410	0.00	Saturday, September 09, 2017	NR	0.00
Monday, July 10, 2017	1,340	0.00	Thursday, August 10, 2017	660	0.00	Sunday, September 10, 2017	NR	0.00
Tuesday, July 11, 2017	290	0.00	Friday, August 11, 2017	500	0.00	Monday, September 11, 2017	180	0.00
Wednesday, July 12, 2017	200	0.00	Saturday, August 12, 2017	NR	0.92	Tuesday, September 12, 2017	40	0.00
Thursday, July 13, 2017	290	0.00	Sunday, August 13, 2017	NR	0.59	Wednesday, September 13, 2017	40	0.00
Friday, July 14, 2017	210	0.00	Monday, August 14, 2017	2,020	0.34	Thursday, September 14, 2017	60	0.00
Saturday, July 15, 2017	NR	0.23	Tuesday, August 15, 2017	530	0.00	Friday, September 15, 2017	50	0.00
Sunday, July 16, 2017	NR	0.00	Wednesday, August 16, 2017	380	0.00	Saturday, September 16, 2017	NR	0.00
Monday, July 17, 2017	1,200	0.00	Thursday, August 17, 2017	2,540	1.63	Sunday, September 17, 2017	NR	0.00
Tuesday, July 18, 2017	850	0.00	Friday, August 18, 2017	710	0.01	Monday, September 18, 2017	80	0.00
Wednesday, July 19, 2017	800	0.00	Saturday, August 19, 2017	NR	0.00	Tuesday, September 19, 2017	50	0.08
Thursday, July 20, 2017	760	0.00	Sunday, August 20, 2017	NR	0.00	Wednesday, September 20, 2017	550	0.01
Friday, July 21, 2017	730	0.00	Monday, August 21, 2017	1,000	0.00	Thursday, September 21, 2017	70	0.00
Saturday, July 22, 2017	NR	0.00	Tuesday, August 22, 2017	160	0.00	Friday, September 22, 2017	50	0.00
Sunday, July 23, 2017	NR	1.43	Wednesday, August 23, 2017	940	0.06	Saturday, September 23, 2017	NR	0.00
Monday, July 24, 2017	2,410	0.26	Thursday, August 24, 2017	1,110	0.36	Sunday, September 24, 2017	NR	0.00
Tuesday, July 25, 2017	700	0.00	Friday, August 25, 2017	510	0.00	Monday, September 25, 2017	70	0.00
Wednesday, July 26, 2017	810	0.00	Saturday, August 26, 2017	NR	0.09	Tuesday, September 26, 2017	630	0.00
Thursday, July 27, 2017	480	0.00	Sunday, August 27, 2017	NR	0.02	Wednesday, September 27, 2017	50	0.01
Friday, July 28, 2017	110	0.00	Monday, August 28, 2017	1,180	0.00	Thursday, September 28, 2017	500	0.05
Saturday, July 29, 2017	NR	0.00	Tuesday, August 29, 2017	520	0.00	Friday, September 29, 2017	830	0.10
Sunday, July 30, 2017	NR	0.00	Wednesday, August 30, 2017	800	0.00	Saturday, September 30, 2017	NR	0.00
Monday, July 31, 2017	210	0.00	Thursday, August 31, 2017	310	0.00	--	-	-

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear
Daily flow volumes provided by Exide.
NR - Not Recorded

Prepared by: BCW 10/16/2017
Checked by: EPW 10/25/2017
Reviewed by: AMF 11/02/2017

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	Measurement Date	Elevation (ft msl)
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: BCW 10/17/2017
Checked by: EPW 10/25/2017
Reviewed by: AMF 11/02/2017

Table 3
French Drain Water
Analytical Data

	Sample ID FD071317-01		**Sample ID** FD071317-02	
	Laboratory ID 17070348-001		**Laboratory ID** 17070348-002	
	Date Collected 7/13/2017 9:00		**Date Collected** 7/13/2017 9:00	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Arsenic	NA	mg/L	0.006	mg/L
Barium	NA	mg/L	0.081	mg/L
Cadmium	NA	mg/L	0.0015	mg/L
Chromium	NA	mg/L	0.011	mg/L
Copper	NA	mg/L	0.0103	mg/L
Iron	NA	mg/L	0.33 J-5	mg/L
Lead	NA	mg/L	0.024	mg/L
Manganese	NA	mg/L	0.003	mg/L
Nickel	NA	mg/L	0.003 J-5	mg/L
Selenium	NA	mg/L	0.0099	mg/L
Silver	NA	mg/L	0.001	mg/L
Zinc	NA	mg/L	0.026	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	1.4 J-5	mg/L	NA	mg/L
Total Dissolved Solids	1,020	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter
4) J-5 - The associated concentratioin is an estimated value detected between the Sample Detection Limit (SDL) and the adjusted Method Quantitation Limit (MQL).

Prepared by: BCW 10/17/2017
Checked by: EPW 10/25/2017
Reviewed by: AMF 11/02/2017

LEGEND

● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline

50 25 0 50

Feet

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	**1**

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 1 in

Friday, July 21, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17070348-001	FD071317-01	Liquid	7/13/2017 09:00	Total Dissolved Solids, Total Suspended Solids
17070348-002	FD071317-02	Liquid	7/13/2017 09:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
17070348-003	SO071317-01	Liquid	7/13/2017 10:30	Total Dissolved Solids, Total Suspended Solids
17070348-004	SO071317-02	Liquid	7/13/2017 10:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
17070348-005	L071317-01	Liquid	7/13/2017 11:00	Total Dissolved Solids, Total Suspended Solids
17070348-006	L071317-02	Liquid	7/13/2017 11:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD071317-01**
Oxidor Sample ID: 17070348-001
Sample Received: 7/13/2017

Matrix: **Liquid**
Sample Collected: **7/13/2017 09:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1020**	mg/L	07/19/17 16:45	SM-2540-C	W.S.	
Total Suspended Solids	1.0	5	**1.4**	mg/L	07/18/17 16:15	SM-2540-D	K.E.L.	J-5

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Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD071317-02**
Oxidor Sample ID: 17070348-002
Matrix: **Liquid**
Sample Received: 7/13/2017
Sample Collected: **7/13/2017 09:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 07/14/17 at 09:00								
Arsenic	0.003	0.005	**0.006**	mg/L	07/14/17 16:00	200.8	G.B.	
Barium	0.003	0.005	**0.081**	mg/L	07/14/17 16:00	200.8	G.B.	
Cadmium	0.0005	0.001	**0.0015**	mg/L	07/14/17 16:00	200.8	G.B.	
Chromium	0.003	0.005	**0.011**	mg/L	07/14/17 16:00	200.8	G.B.	
Copper	0.0025	0.005	**0.0103**	mg/L	07/14/17 16:00	200.8	G.B.	
Iron	0.25	0.5	**0.33**	mg/L	07/14/17 16:00	200.8	G.B.	J-5
Lead	0.003	0.005	**0.024**	mg/L	07/14/17 16:00	200.8	G.B.	
Manganese	0.001	0.002	**0.003**	mg/L	07/14/17 16:00	200.8	G.B.	
Nickel	0.003	0.005	**0.003**	mg/L	07/14/17 16:00	200.8	G.B.	J-5
Selenium	0.0025	0.005	**0.0099**	mg/L	07/14/17 16:00	200.8	G.B.	
Silver	0.001	0.001	**0.001**	mg/L	07/14/17 16:00	200.8	G.B.	
Zinc	0.003	0.005	**0.026**	mg/L	07/14/17 16:00	200.8	G.B.	
Digested by method 245.1 on 07/17/17 at 09:00								
Mercury	0.0001	0.0002	ND	mg/L	07/17/17 14:17	245.1	G.B.	

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Sample Cross Reference

Project Name: **Raw Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD071317-01	17070348-001	Total Dissolved Solids	SM-2540-C	TDS__07523_L
		Total Suspended Solids	SM-2540-D	TSS__11834_L
FD071317-02	17070348-002	Mercury	245.1	MERC_08738_L
		Arsenic	200.8	META_01469_L
		Selenium	200.8	META_01469_L
		Silver	200.8	META_01469_L
		Zinc	200.8	META_01469_L
		Manganese	200.8	META_01469_L
		Lead	200.8	META_01469_L
		Iron	200.8	META_01469_L
		Copper	200.8	META_01469_L
		Chromium	200.8	META_01469_L
		Nickel	200.8	META_01469_L
		Barium	200.8	META_01469_L
		Cadmium	200.8	META_01469_L
SO071317-01	17070348-003	Total Dissolved Solids	SM-2540-C	TDS__07523_L
		Total Suspended Solids	SM-2540-D	TSS__11934_L
SO071317-02	17070348-004	Mercury	245.1	MERC_08738_L
		Copper	200.8	META_01869_L
		Silver	200.8	META_01869_L
		Selenium	200.8	META_01869_L
		Nickel	200.8	META_01869_L
		Manganese	200.8	META_01869_L
		Iron	200.8	META_01869_L
		Chromium	200.8	META_01869_L
		Zinc	200.8	META_01869_L
		Cadmium	200.8	META_01869_L
		Barium	200.8	META_01869_L
		Arsenic	200.8	META_01869_L
		Lead	200.8	META_01869_L
L071317-01	17070348-005	Total Dissolved Solids	SM-2540-C	TDS__07523_L
		Total Suspended Solids	SM-2540-D	TSS__11934_L
L071317-02	17070348-006	Mercury	245.1	MERC_09138_L
		Lead	200.8	META_01869_L
		Arsenic	200.8	META_01869_L
		Barium	200.8	META_01869_L
		Cadmium	200.8	META_01869_L
		Chromium	200.8	META_01869_L
		Iron	200.8	META_01869_L
		Manganese	200.8	META_01869_L
		Nickel	200.8	META_01869_L
		Selenium	200.8	META_01869_L
		Silver	200.8	META_01869_L
		Zinc	200.8	META_01869_L
		Copper	200.8	META_01869_L

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__07523_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	955 mg/L		1000 mg/L	96%	90-110%			
LCSD	Total Dissolved Solids	975 mg/L		1000 mg/L	98%	90-110%	2.1%	0-5%	
Replicate	Total Dissolved Solids	62800 mg/L	63600 mg/L				1.3%	0-5%	
QCBatchID	**TSS__11834_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	477 mg/L		500 mg/L	95%	85-115%			
LCSD	Total Suspended Solids	484 mg/L		500 mg/L	97%	85-115%	1.5%	0-15%	
Replicate	Total Suspended Solids	26.0 mg/L	23.0 mg/L				12.2%	0-15%	
QCBatchID	**TSS__11934_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	497 mg/L		500 mg/L	99%	85-115%			
LCSD	Total Suspended Solids	480 mg/L		500 mg/L	96%	85-115%	3.5%	0-15%	
Replicate	Total Suspended Solids	86.0 mg/L	106 mg/L				20.8%	0-15%	Q-7
QCBatchID	**MERC_08738_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0052 mg/L		0.005 mg/L	104%	85-115%			
LCSD	Mercury	0.0052 mg/L		0.005 mg/L	104%	85-115%	0.0%	0-25%	
MS	Mercury	0.0053 mg/L	ND	0.005 mg/L	106%	80-120%			
MSD	Mercury	0.0053 mg/L	ND	0.005 mg/L	106%	80-120%	0.4%	0-25%	
QCBatchID	**MERC_09138_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0053 mg/L		0.005 mg/L	106%	85-115%			
LCSD	Mercury	0.0053 mg/L		0.005 mg/L	106%	85-115%	0.4%	0-25%	
MS	Mercury	0.0054 mg/L	ND	0.005 mg/L	108%	80-120%			
MSD	Mercury	0.0054 mg/L	ND	0.005 mg/L	108%	80-120%	0.0%	0-25%	
QCBatchID	**META_01469_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.495 mg/L		0.5 mg/L	99%	85-115%			

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_01469_L**								
	Barium	0.499 mg/L		0.5 mg/L	100%	85-115%			
	Cadmium	0.5043 mg/L		0.5 mg/L	101%	85-115%			
	Chromium	0.490 mg/L		0.5 mg/L	98%	85-115%			
	Copper	0.4825 mg/L		0.5 mg/L	97%	85-115%			
	Iron	50.0 mg/L		50.5 mg/L	99%	85-115%			
	Lead	0.493 mg/L		0.5 mg/L	99%	85-115%			
	Manganese	0.482 mg/L		0.5 mg/L	96%	85-115%			
	Nickel	0.483 mg/L		0.5 mg/L	97%	85-115%			
	Selenium	0.4782 mg/L		0.5 mg/L	96%	85-115%			
	Silver	0.516 mg/L		0.5 mg/L	103%	85-115%			
	Zinc	0.500 mg/L		0.5 mg/L	100%	85-115%			
LCSD	Arsenic	0.500 mg/L		0.5 mg/L	100%	85-115%	1.0%	0-20%	
	Barium	0.504 mg/L		0.5 mg/L	101%	85-115%	1.0%	0-20%	
	Cadmium	0.5101 mg/L		0.5 mg/L	102%	85-115%	1.1%	0-20%	
	Chromium	0.492 mg/L		0.5 mg/L	98%	85-115%	0.4%	0-20%	
	Copper	0.4919 mg/L		0.5 mg/L	98%	85-115%	1.9%	0-20%	
	Iron	51.1 mg/L		50.5 mg/L	101%	85-115%	2.2%	0-20%	
	Lead	0.500 mg/L		0.5 mg/L	100%	85-115%	1.4%	0-20%	
	Manganese	0.489 mg/L		0.5 mg/L	98%	85-115%	1.4%	0-20%	
	Nickel	0.486 mg/L		0.5 mg/L	97%	85-115%	0.6%	0-20%	
	Selenium	0.4980 mg/L		0.5 mg/L	100%	85-115%	4.1%	0-20%	
	Silver	0.514 mg/L		0.5 mg/L	103%	85-115%	0.4%	0-20%	
	Zinc	0.511 mg/L		0.5 mg/L	102%	85-115%	2.2%	0-20%	
MS	Arsenic	0.504 mg/L	0.006 mg/L	0.5 mg/L	100%	80-120%			
	Barium	0.581 mg/L	0.081 mg/L	0.5 mg/L	100%	80-120%			
	Cadmium	0.4944 mg/L	0.0015 mg/L	0.5 mg/L	99%	80-120%			
	Chromium	0.500 mg/L	0.011 mg/L	0.5 mg/L	98%	80-120%			
	Copper	0.4872 mg/L	0.0103 mg/L	0.5 mg/L	95%	80-120%			
	Iron	50.3 mg/L	0.33 mg/L	50.5 mg/L	99%	80-120%			
	Lead	0.517 mg/L	0.024 mg/L	0.5 mg/L	99%	80-120%			
	Manganese	0.487 mg/L	0.003 mg/L	0.5 mg/L	97%	80-120%			
	Nickel	0.484 mg/L	0.003 mg/L	0.5 mg/L	96%	80-120%			
	Selenium	0.5025 mg/L	0.0099 mg/L	0.5 mg/L	99%	80-120%			
	Silver	0.499 mg/L	0.001 mg/L	0.5 mg/L	100%	80-120%			
	Zinc	0.514 mg/L	0.026 mg/L	0.5 mg/L	98%	80-120%			
MSD	Arsenic	0.497 mg/L	0.006 mg/L	0.5 mg/L	98%	80-120%	1.4%	0-20%	
	Barium	0.589 mg/L	0.081 mg/L	0.5 mg/L	102%	80-120%	1.4%	0-20%	
	Cadmium	0.4934 mg/L	0.0015 mg/L	0.5 mg/L	98%	80-120%	0.2%	0-20%	
	Chromium	0.500 mg/L	0.011 mg/L	0.5 mg/L	98%	80-120%	0.0%	0-20%	
	Copper	0.4852 mg/L	0.0103 mg/L	0.5 mg/L	95%	80-120%	0.4%	0-20%	
	Iron	50.0 mg/L	0.33 mg/L	50.5 mg/L	98%	80-120%	0.6%	0-20%	
	Lead	0.516 mg/L	0.024 mg/L	0.5 mg/L	98%	80-120%	0.2%	0-20%	
	Manganese	0.487 mg/L	0.003 mg/L	0.5 mg/L	97%	80-120%	0.0%	0-20%	

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_01469_L**								
	Nickel	0.484 mg/L	0.003 mg/L	0.5 mg/L	96%	80-120%	0.0%	0-20%	
	Selenium	0.4998 mg/L	0.0099 mg/L	0.5 mg/L	98%	80-120%	0.5%	0-20%	
	Silver	0.491 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%	1.6%	0-20%	
	Zinc	0.515 mg/L	0.026 mg/L	0.5 mg/L	98%	80-120%	0.2%	0-20%	
QCBatchID	**META_01869_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.504 mg/L		0.5 mg/L	101%	85-115%			
	Barium	0.517 mg/L		0.5 mg/L	103%	85-115%			
	Cadmium	0.4996 mg/L		0.5 mg/L	100%	85-115%			
	Chromium	0.480 mg/L		0.5 mg/L	96%	85-115%			
	Copper	0.4820 mg/L		0.5 mg/L	96%	85-115%			
	Iron	51.6 mg/L		50.5 mg/L	102%	85-115%			
	Lead	0.496 mg/L		0.5 mg/L	99%	85-115%			
	Manganese	0.480 mg/L		0.5 mg/L	96%	85-115%			
	Nickel	0.471 mg/L		0.5 mg/L	94%	85-115%			
	Selenium	0.5347 mg/L		0.5 mg/L	107%	85-115%			
	Silver	0.507 mg/L		0.5 mg/L	101%	85-115%			
	Zinc	0.513 mg/L		0.5 mg/L	103%	85-115%			
LCSD	Arsenic	0.514 mg/L		0.5 mg/L	103%	85-115%	2.0%	0-20%	
	Barium	0.528 mg/L		0.5 mg/L	106%	85-115%	2.1%	0-20%	
	Cadmium	0.5055 mg/L		0.5 mg/L	101%	85-115%	1.2%	0-20%	
	Chromium	0.484 mg/L		0.5 mg/L	97%	85-115%	0.8%	0-20%	
	Copper	0.5028 mg/L		0.5 mg/L	101%	85-115%	4.2%	0-20%	
	Iron	53.0 mg/L		50.5 mg/L	105%	85-115%	2.7%	0-20%	
	Lead	0.486 mg/L		0.5 mg/L	97%	85-115%	2.0%	0-20%	
	Manganese	0.488 mg/L		0.5 mg/L	98%	85-115%	1.7%	0-20%	
	Nickel	0.475 mg/L		0.5 mg/L	95%	85-115%	0.8%	0-20%	
	Selenium	0.5366 mg/L		0.5 mg/L	107%	85-115%	0.4%	0-20%	
	Silver	0.524 mg/L		0.5 mg/L	105%	85-115%	3.3%	0-20%	
	Zinc	0.526 mg/L		0.5 mg/L	105%	85-115%	2.5%	0-20%	
MS	Arsenic	0.509 mg/L	0.002 mg/L	0.5 mg/L	101%	80-120%			
	Barium	0.599 mg/L	0.076 mg/L	0.5 mg/L	105%	80-120%			

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_01869_L**								
	Cadmium	0.5012 mg/L	ND	0.5 mg/L	100%	80-120%			
	Chromium	0.486 mg/L	0.002 mg/L	0.5 mg/L	97%	80-120%			
	Copper	0.5976 mg/L	0.0998 mg/L	0.5 mg/L	100%	80-120%			
	Iron	52.9 mg/L	0.441 mg/L	50.5 mg/L	104%	80-120%			
	Lead	0.459 mg/L	0.001 mg/L	0.5 mg/L	92%	80-120%			
	Manganese	0.537 mg/L	0.056 mg/L	0.5 mg/L	96%	80-120%			
	Nickel	0.474 mg/L	0.004 mg/L	0.5 mg/L	94%	80-120%			
	Selenium	0.5282 mg/L	0.001 mg/L	0.5 mg/L	105%	80-120%			
	Silver	0.511 mg/L	ND	0.5 mg/L	102%	80-120%			
	Zinc	0.729 mg/L	0.229 mg/L	0.5 mg/L	100%	80-120%			
MSD	Arsenic	0.518 mg/L	0.002 mg/L	0.5 mg/L	103%	80-120%	1.8%	0-20%	
	Barium	0.582 mg/L	0.076 mg/L	0.5 mg/L	101%	80-120%	2.9%	0-20%	
	Cadmium	0.4974 mg/L	ND	0.5 mg/L	100%	80-120%	0.8%	0-20%	
	Chromium	0.491 mg/L	0.002 mg/L	0.5 mg/L	98%	80-120%	1.0%	0-20%	
	Copper	0.6259 mg/L	0.0998 mg/L	0.5 mg/L	105%	80-120%	4.6%	0-20%	
	Iron	52.5 mg/L	0.441 mg/L	50.5 mg/L	103%	80-120%	0.8%	0-20%	
	Lead	0.471 mg/L	0.001 mg/L	0.5 mg/L	94%	80-120%	2.6%	0-20%	
	Manganese	0.547 mg/L	0.056 mg/L	0.5 mg/L	98%	80-120%	1.8%	0-20%	
	Nickel	0.482 mg/L	0.004 mg/L	0.5 mg/L	96%	80-120%	1.7%	0-20%	
	Selenium	0.5341 mg/L	0.001 mg/L	0.5 mg/L	107%	80-120%	1.1%	0-20%	
	Silver	0.506 mg/L	ND	0.5 mg/L	101%	80-120%	1.0%	0-20%	
	Zinc	0.732 mg/L	0.229 mg/L	0.5 mg/L	101%	80-120%	0.4%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples Quarterly**

J-27	Refer to narrative.
J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Q-7	Recovery and/or RPD outside desirable limits.
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

Samples 17070348-003 and -005 had on filter recovery weights of >200 mg. These samples could not be re-analyzed for lower on filter recovery weights.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Receipt temp: **4.0 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD071317-01**
Oxidor Sample ID: **17070348-001**
Collected: **07/13/17 09:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD071317-02**
Oxidor Sample ID: **17070348-002**
Collected: **07/13/17 09:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SO071317-01**
Oxidor Sample ID: **17070348-003**
Collected: **07/13/17 10:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **SO071317-02**
Oxidor Sample ID: **17070348-004**
Collected: **07/13/17 10:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **L071317-01**
Oxidor Sample ID: **17070348-005**
Collected: **07/13/17 11:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **L071317-02**
Oxidor Sample ID: **17070348-006**
Collected: **07/13/17 11:00**

Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**

EXIDE
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

17070348

INDUSTRY: EXIDE Technologies	OUTFALL: WS	SAMPLER JOSE ACEVEDO
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	NATURE OF INDUSTRY: Secondary Smelting	REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE(S): Billy King @ exide.com		SIGNATURE: Jose Acevedo

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD071317-01	7/13/17	9:00 am.	G	TDS-TSS	9.0			None	J.A
002	FD071317-02	7/13/17	9:00 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	9.0			HNo3/250 ml. plastic	J.A
003	S0071317-01	7/13/17	10:30 am.	G	TDS-TSS	7.6			None	J.A
004	S0071317-02	7/13/17	10:30 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	7.6			HNO3/250 ml. plastic	J.A
005	L071317-01	7/13/17	11:00 am.	G	TDS-TSS	12.2			NoNe	J.A
006	L071317-02	7/13/17	11:00 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	12.2			HNo3/250 ml. plastic	J.A

FIELD INFORMATION: Raw Grab Samples Quarterly

E-MAIL RESULTS TO: Billy King @ exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	7-13-17	1:35 pm	Arnold	ACS#6	7/13/17	1:35 pm
Arnold	ACS#6	7/13/17	3:50 pm		OXIDOR	7/13/17	15 50

4.0°C 0Y/04

** TC = TIME COMPOSITE (96PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB WS - WATER SAMPLES

February 19, 2018 1302086

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2017 FOURTH QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the fourth quarter of 2017. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the fourth quarter of 2017 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.

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- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the fourth quarter 2017 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the fourth quarter of 2017.

A more detailed description of the results of data collection activities and inspections is included in section 3 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160331/e20170401/myear). At the time of the Site inspection, the flow meter was not recording properly. Exide was notified of the equipment malfunction at the time of the inspection and maintenance was performed as needed.

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the fourth quarter of 2017. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart Creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in third quarter 2017 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on November 28, 2017 sealant previously used to fill cracks appeared to be in deteriorating condition. Exide was notified and repairs were made as needed. No seepage from the floodwall was observed. The floodwall waterstops and joint fillers were generally in good condition and no major cracks were observed with the exception as noted above.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on November 28, 2017. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the fourth quarter of 2017. Due to abnormal results from the quarterly sampling on October 4, 2017, resampling of the French Drain was conducted on October 23, 2017 and on October 27, 2017. All analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the fourth quarter of 2017 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Emily White

Emily White
Staff Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

EPW/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Oct-17			Nov-17			Dec-17		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
10,490		1.90	3,892		0.80	15,810		4.03
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Sunday, October 01, 2017	NR	0.00	Wednesday, November 1, 2017	130	0.00	Friday, December 1, 2017	30	0.00
Monday, October 02, 2017	NR[1]	0.00	Thursday, November 2, 2017	50	0.00	Saturday, December 2, 2017	NR	0.00
Tuesday, October 03, 2017	950	0.43	Friday, November 3, 2017	50	0.00	Sunday, December 3, 2017	NR	0.00
Wednesday, October 04, 2017	3,430	0.12	Saturday, November 4, 2017	NR	0.00	Monday, December 4, 2017	40	0.57
Thursday, October 05, 2017	640	0.00	Sunday, November 5, 2017	NR	0.00	Tuesday, December 5, 2017	660	0.00
Friday, October 06, 2017	120	0.00	Monday, November 6, 2017	140	0.00	Wednesday, December 6, 2017	370	0.00
Saturday, October 07, 2017	NR	0.00	Tuesday, November 7, 2017	40	0.00	Thursday, December 7, 2017	NR[1]	0.00
Sunday, October 08, 2017	NR	0.00	Wednesday, November 8, 2017	790	0.79	Friday, December 8, 2017	NR[1]	0.00
Monday, October 09, 2017	410	0.00	Thursday, November 9, 2017	1,560	0.00	Saturday, December 9, 2017	NR	0.00
Tuesday, October 10, 2017	240	0.09	Friday, November 10, 2017	340	0.01	Sunday, December 10, 2017	NR	0.00
Wednesday, October 11, 2017	250	0.00	Saturday, November 11, 2017	NR	0.00	Monday, December 11, 2017	390	0.00
Thursday, October 12, 2017	200	0.00	Sunday, November 12, 2017	NR	0.00	Tuesday, December 12, 2017	50	0.00
Friday, October 13, 2017	90	0.00	Monday, November 13, 2017	310	0.00	Wednesday, December 13, 2017	40	0.00
Saturday, October 14, 2017	NR	0.00	Tuesday, November 14, 2017	40	0.00	Thursday, December 14, 2017	40	0.00
Sunday, October 15, 2017	NR	0.11	Wednesday, November 15, 2017	60	0.00	Friday, December 15, 2017	NR	0.00
Monday, October 16, 2017	420	0.00	Thursday, November 16, 2017	50	0.00	Saturday, December 16, 2017	NR	0.65
Tuesday, October 17, 2017	100	0.00	Friday, November 17, 2017	50	0.00	Sunday, December 17, 2017	NR	0.00
Wednesday, October 18, 2017	110	0.00	Saturday, November 18, 2017	NR	0.00	Monday, December 18, 2017	NR	0.00
Thursday, October 19, 2017	90	0.00	Sunday, November 19, 2017	NR	0.00	Tuesday, December 19, 2017	NR	1.75
Friday, October 20, 2017	100	0.00	Monday, November 20, 2017	160	0.00	Wednesday, December 20, 2017	6,130	0.02
Saturday, October 21, 2017	NR	0.00	Tuesday, November 21, 2017	40	0.00	Thursday, December 21, 2017	930	0.00
Sunday, October 22, 2017	NR	1.12	Wednesday, November 22, 2017	40	0.00	Friday, December 22, 2017	NR	1.03
Monday, October 23, 2017	1,160	0.00	Thursday, November 23, 2017	NR	0.00	Saturday, December 23, 2017	NR	0.00
Tuesday, October 24, 2017	190	0.00	Friday, November 24, 2017	NR	0.00	Sunday, December 24, 2017	NR	0.00
Wednesday, October 25, 2017	210	0.00	Saturday, November 25, 2017	NR	0.00	Monday, December 25, 2017	NR	0.00
Thursday, October 26, 2017	210	0.00	Sunday, November 26, 2017	NR	0.00	Tuesday, December 26, 2017	4,980	0.01
Friday, October 27, 2017	180	0.00	Monday, November 27, 2017	48 [2]	0.00	Wednesday, December 27, 2017	1,640	0.00
Saturday, October 28, 2017	NR	0.00	Tuesday, November 28, 2017	2	0.00	Thursday, December 28, 2017	140	0.00
Sunday, October 29, 2017	NR	0.00	Wednesday, November 29, 2017	40	0.00	Friday, December 29, 2017	370	0.00
Monday, October 30, 2017	1,240	0.00	Thursday, November 30, 2017	0	0.00	Saturday, December 30, 2017	NR	0.00
Tuesday, October 31, 2017	150	0.03	---	---	---	Sunday, December 31, 2017	NR	0.00

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear
Daily flow volumes provided by Exide.
NR - Not Recorded
[1] Meter not working properly.
[2] Flow meter not working properly, gallons are estimated; maintenance performed.

Prepared by: EPW 01/04/2018
Checked by: TJG 01/05/2018
Reviewed by: AMF 02/05/2018

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
			11/27/2018	5.71	626.22
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
			11/27/2018	6.77	626.74
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72
			11/27/2018	10.82	625.89

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
			11/27/2018	3.54	627.42
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
			11/27/2018	0.85	631.74
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
			11/27/2018	3.62	629.21
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
			11/27/2018	3.98	628.57
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54
			11/27/2018	5.41	625.57

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: EPW 01/04/2018
Checked by: TJG 01/05/2018
Reviewed by: AMF 02/05/2018

Table 3
French Drain Water
Analytical Data

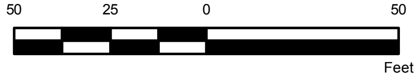
	Sample ID		**Sample ID**		**Sample ID**		**Sample ID**		**Sample ID**		**Sample ID**	
	FD100417-01		FD100417-02		FD102317-01		FD102317-02		FD102717-01		FD102717-02	
	Laboratory ID		**Laboratory ID**		**Laboratory ID**		**Laboratory ID**		**Laboratory ID**		**Laboratory ID**	
	17100122-001		17100122-002		17100612-001		17100612-002		17100739-001		17100739-002	
	Date Collected		**Date Collected**		**Date Collected**		**Date Collected**		**Date Collected**		**Date Collected**	
	10/4/2017 09:30		10/4/2017 09:30		10/23/2017 10:30		10/23/2017 10:30		10/27/2017 10:00		10/27/2017 10:00	
Metals												
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	1.68	mg/L	NA	mg/L	0.003 J-5	mg/L	NA	mg/L	0.003 J-5	mg/L
Barium	NA	mg/L	0.115	mg/L	NA	mg/L	0.059	mg/L	NA	mg/L	0.047	mg/L
Cadmium	NA	mg/L	0.0021	mg/L	NA	mg/L	0.0009 J-5	mg/L	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.499	mg/L	NA	mg/L	0.023	mg/L	NA	mg/L	0.017	mg/L
Copper	NA	mg/L	0.2114 Dx10	mg/L	NA	mg/L	0.0086	mg/L	NA	mg/L	0.0068	mg/L
Iron	NA	mg/L	4.28	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.114	mg/L	NA	mg/L	0.030	mg/L	NA	mg/L	0.008	mg/L
Manganese	NA	mg/L	0.221	mg/L	NA	mg/L	0.003	mg/L	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	0.102	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0958	mg/L	NA	mg/L	0.0103	mg/L	NA	mg/L	0.0154	mg/L
Silver	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.023	mg/L	NA	mg/L	0.037	mg/L	NA	mg/L	0.006	mg/L
Mercury	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L	NA	mg/L	ND	mg/L
General Chemistry												
Parameter:	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	14.4	mg/L	NA	mg/L	4.4 J-5	mg/L	NA	mg/L	2.2 J-5	mg/L	NA	mg/L
Total Dissolved Solids	440	mg/L	NA	mg/L	1,080	mg/L	NA	mg/L	1,440	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter
4) J-5 - The associated concentration is an estimated value detected between the sample detection limit and the adjusted method detection limit.
5) Dx10 - Sample diluted by 10.

Prepared by: BCW 11/17/2017
Checked by: EPW 01/05/2018
Reviewed by: AMF 02/05/2018

LEGEND

●	Transect Location
⊕	Monitoring Well Location
🟩	French Drain
🟥	Flood Wall
—	Approximate Creek Centerline



NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
1 in
0

OXIDOR Laboratories

Wednesday, October 11, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17100122-001	FD100417-01	Liquid	10/4/2017 09:30	Total Dissolved Solids, Total Suspended Solids
17100122-002	FD100417-02	Liquid	10/4/2017 09:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
17100122-003	SO100417-01	Liquid	10/4/2017 10:15	Total Dissolved Solids, Total Suspended Solids
17100122-004	SO100417-02	Liquid	10/4/2017 10:15	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
17100122-005	L0100417-01	Liquid	10/4/2017 11:00	Total Dissolved Solids, Total Suspended Solids
17100122-006	L0100417-02	Liquid	10/4/2017 11:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD100417-01**
Oxidor Sample ID: 17100122-001
Sample Received: 10/4/2017
Matrix: **Liquid**
Sample Collected: **10/4/2017 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	50	**440**	mg/L	10/09/17 17:00	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**14.4**	mg/L	10/06/17 10:45	SM-2540-D	K.E.L.	

Exide Technologies
Billy King

Analytical Report

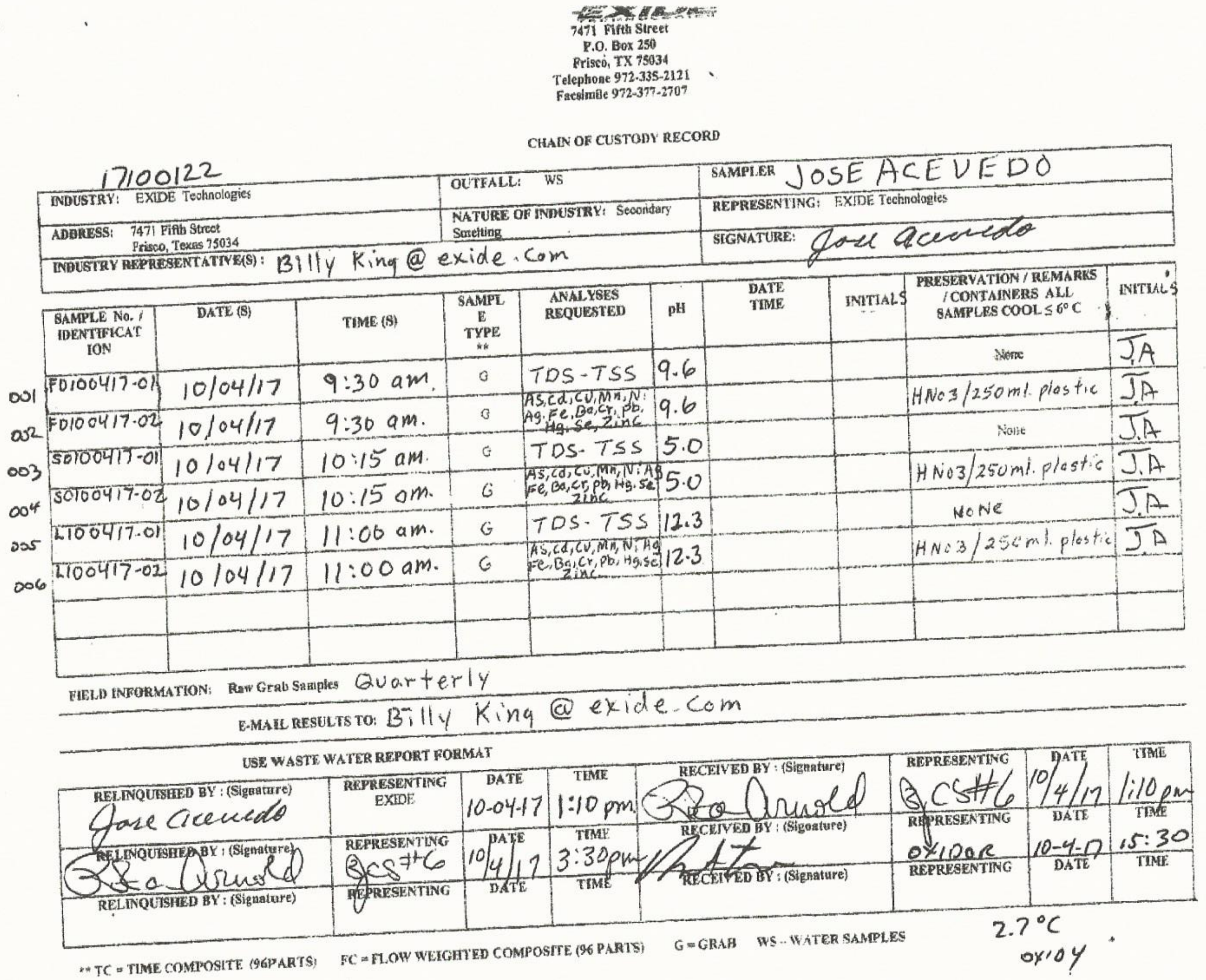
Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD100417-02**
Oxidor Sample ID: 17100122-002
Sample Received: 10/4/2017
Matrix: **Liquid**
Sample Collected: **10/4/2017 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 10/10/17 at 09:10								
Arsenic	0.003	0.005	**1.68**	mg/L	10/10/17 14:23	200.8	S.M.	
Barium	0.003	0.005	**0.115**	mg/L	10/10/17 14:23	200.8	S.M.	
Cadmium	0.0005	0.001	**0.0021**	mg/L	10/10/17 14:23	200.8	S.M.	
Chromium	0.003	0.005	**0.499**	mg/L	10/10/17 14:23	200.8	S.M.	
Copper	0.0250	0.005	**0.2114**	mg/L	10/10/17 15:05	200.8	S.M.	Dx10
Iron	0.25	0.5	**4.28**	mg/L	10/10/17 14:23	200.8	S.M.	
Lead	0.003	0.005	**0.114**	mg/L	10/10/17 14:23	200.8	S.M.	
Manganese	0.001	0.002	**0.221**	mg/L	10/10/17 14:23	200.8	S.M.	
Nickel	0.003	0.005	**0.102**	mg/L	10/10/17 14:23	200.8	S.M.	
Selenium	0.0025	0.005	**0.0958**	mg/L	10/10/17 14:23	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	10/10/17 14:23	200.8	S.M.	
Zinc	0.003	0.005	**0.023**	mg/L	10/10/17 14:23	200.8	S.M.	
Digested by method 245.1 on 10/06/17 at 09:04								
Mercury	0.0001	0.0002	ND	mg/L	10/06/17 16:27	245.1	A.W.	

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**



EXIDE
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

17100122

INDUSTRY: EXIDE Technologies
OUTFALL: WS
SAMPLER JOSE ACEVEDO
ADDRESS: 7471 Fifth Street
Frisco, Texas 75034
NATURE OF INDUSTRY: Secondary Smelting
REPRESENTING: EXIDE Technologies
SIGNATURE: Jose Acevedo
INDUSTRY REPRESENTATIVE(S): Billy King @ exide.Com

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD100417-01	10/04/17	9:30 am.	G	TDS-TSS	9.6			None	JA
002	FD100417-02	10/04/17	9:30 am.	G	AS, Cd, CU, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	9.6			HNo3/250ml. plastic	JA
003	SO100417-01	10/04/17	10:15 am.	G	TDS-TSS	5.0			None	JA
004	SO100417-02	10/04/17	10:15 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	5.0			HNo3/250ml. plastic	JA
005	L100417-01	10/04/17	11:06 am.	G	TDS-TSS	12.3			NoNe	JA
006	L100417-02	10/04/17	11:00 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	12.3			HNo3/250ml. plastic	JA

FIELD INFORMATION: Raw Grab Samples Quarterly

E-MAIL RESULTS TO: Billy King @ exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	10-04-17	1:10 pm	Rosa Arnold	BCS#6	10/4/17	1:10 pm
Rosa Arnold	BCS#6	10/4/17	3:30pm		OXIDOR	10-4-17	15:30

** TC = TIME COMPOSITE (96PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB WS - WATER SAMPLES

2.7°C
ox104

Tuesday, October 31, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples

Oxidor received 2 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17100612-001	FD102317-01	Liquid	10/23/2017 10:30	Total Dissolved Solids, Total Suspended Solids
17100612-002	FD102317-02	Liquid	10/23/2017 10:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD102317-01**
Oxidor Sample ID: 17100612-001
Sample Received: 10/23/2017

Matrix: **Liquid**
Sample Collected: **10/23/2017 10:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1080**	mg/L	10/24/17 12:40	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**4.4**	mg/L	10/24/17 15:40	SM-2540-D	K.E.L.	J-5

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Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD102317-02**
Oxidor Sample ID: 17100612-002
Sample Received: 10/23/2017

Matrix: **Liquid**
Sample Collected: **10/23/2017 10:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 10/27/17 at 11:37								
Arsenic	0.003	0.005	**0.003**	mg/L	10/30/17 17:02	200.8	S.M.	J-5
Barium	0.003	0.005	**0.059**	mg/L	10/30/17 17:02	200.8	S.M.	
Cadmium	0.0005	0.001	**0.0009**	mg/L	10/30/17 17:02	200.8	S.M.	J-5
Chromium	0.003	0.005	**0.023**	mg/L	10/30/17 17:02	200.8	S.M.	
Copper	0.0025	0.005	**0.0086**	mg/L	10/30/17 17:02	200.8	S.M.	
Iron	0.25	0.5	ND	mg/L	10/30/17 17:02	200.8	S.M.	
Lead	0.003	0.005	**0.030**	mg/L	10/30/17 17:02	200.8	S.M.	
Manganese	0.001	0.002	**0.003**	mg/L	10/30/17 17:02	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	10/30/17 17:02	200.8	S.M.	
Selenium	0.0025	0.005	**0.0103**	mg/L	10/30/17 17:02	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	10/30/17 17:02	200.8	S.M.	
Zinc	0.003	0.005	**0.037**	mg/L	10/30/17 17:02	200.8	S.M.	
Digested by method 245.1 on 10/24/17 at 09:10								
Mercury	0.0001	0.0002	ND	mg/L	10/24/17 15:44	245.1	A.W.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD102317-01	17100612-001	Total Dissolved Solids	SM-2540-C	TDS__01324_L
		Total Suspended Solids	SM-2540-D	TSS__11735_L
FD102317-02	17100612-002	Mercury	245.1	MERC_09639_L
		Zinc	200.8	META_08470_L
		Silver	200.8	META_08470_L
		Selenium	200.8	META_08470_L
		Nickel	200.8	META_08470_L
		Manganese	200.8	META_08470_L
		Lead	200.8	META_08470_L
		Iron	200.8	META_08470_L
		Copper	200.8	META_08470_L
		Chromium	200.8	META_08470_L
		Cadmium	200.8	META_08470_L
		Barium	200.8	META_08470_L
		Arsenic	200.8	META_08470_L

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QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__01324_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	1000 mg/L		1000 mg/L	101%	90-110%			
LCSD	Total Dissolved Solids	1000 mg/L		1000 mg/L	100%	90-110%	0.0%	0-5%	
Replicate	Total Dissolved Solids	1060 mg/L	1080 mg/L				1.9%	0-5%	
QCBatchID	**TSS__11735_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	479 mg/L		500 mg/L	96%	85-115%			
LCSD	Total Suspended Solids	454 mg/L		500 mg/L	91%	85-115%	5.4%	0-15%	
Replicate	Total Suspended Solids	34.0 mg/L	37.0 mg/L				8.5%	0-15%	
QCBatchID	**MERC_09639_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0101 mg/L		0.01 mg/L	101%	85-115%			
LCSD	Mercury	0.0102 mg/L		0.01 mg/L	102%	85-115%	1.0%	0-25%	
MS	Mercury	0.0101 mg/L	ND	0.01 mg/L	101%	80-120%			
MSD	Mercury	0.0101 mg/L	ND	0.01 mg/L	101%	80-120%	0.0%	0-25%	
QCBatchID	**META_08470_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.476 mg/L		0.5 mg/L	95%	85-115%			
	Barium	0.496 mg/L		0.5 mg/L	99%	85-115%			
	Cadmium	0.4978 mg/L		0.5 mg/L	100%	85-115%			
	Chromium	0.496 mg/L		0.5 mg/L	99%	85-115%			
	Copper	0.4886 mg/L		0.5 mg/L	98%	85-115%			
	Iron	49.3 mg/L		50.5 mg/L	98%	85-115%			
	Lead	0.470 mg/L		0.5 mg/L	94%	85-115%			
	Manganese	0.474 mg/L		0.5 mg/L	95%	85-115%			
	Nickel	0.488 mg/L		0.5 mg/L	98%	85-115%			
	Selenium	0.5073 mg/L		0.5 mg/L	102%	85-115%			
	Silver	0.509 mg/L		0.5 mg/L	102%	85-115%			
	Zinc	0.491 mg/L		0.5 mg/L	98%	85-115%			
LCSD	Arsenic	0.492 mg/L		0.5 mg/L	98%	85-115%	3.3%	0-20%	
	Barium	0.484 mg/L		0.5 mg/L	97%	85-115%	2.4%	0-20%	

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Billy King

QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_08470_L**								
	Cadmium	0.4887 mg/L		0.5 mg/L	98%	85-115%	1.8%	0-20%	
	Chromium	0.497 mg/L		0.5 mg/L	99%	85-115%	0.2%	0-20%	
	Copper	0.5024 mg/L		0.5 mg/L	101%	85-115%	2.8%	0-20%	
	Iron	49.7 mg/L		50.5 mg/L	98%	85-115%	0.8%	0-20%	
	Lead	0.464 mg/L		0.5 mg/L	93%	85-115%	1.3%	0-20%	
	Manganese	0.478 mg/L		0.5 mg/L	96%	85-115%	0.8%	0-20%	
	Nickel	0.490 mg/L		0.5 mg/L	98%	85-115%	0.4%	0-20%	
	Selenium	0.5191 mg/L		0.5 mg/L	104%	85-115%	2.3%	0-20%	
	Silver	0.506 mg/L		0.5 mg/L	101%	85-115%	0.6%	0-20%	
	Zinc	0.499 mg/L		0.5 mg/L	100%	85-115%	1.6%	0-20%	
MS	Arsenic	0.491 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%			
	Barium	0.529 mg/L	0.04 mg/L	0.5 mg/L	98%	80-120%			
	Cadmium	0.4881 mg/L	ND	0.5 mg/L	98%	80-120%			
	Chromium	0.486 mg/L	ND	0.5 mg/L	97%	80-120%			
	Copper	0.4943 mg/L	0.014 mg/L	0.5 mg/L	96%	80-120%			
	Iron	47.5 mg/L	0.058 mg/L	50.5 mg/L	94%	80-120%			
	Lead	0.462 mg/L	ND	0.5 mg/L	92%	80-120%			
	Manganese	0.472 mg/L	0.004 mg/L	0.5 mg/L	94%	80-120%			
	Nickel	0.477 mg/L	0.001 mg/L	0.5 mg/L	95%	80-120%			
	Selenium	0.5219 mg/L	ND	0.5 mg/L	104%	80-120%			
	Silver	0.495 mg/L	ND	0.5 mg/L	99%	80-120%			
	Zinc	0.517 mg/L	0.042 mg/L	0.5 mg/L	95%	80-120%			
MSD	Arsenic	0.491 mg/L	0.001 mg/L	0.5 mg/L	98%	80-120%	0.0%	0-20%	
	Barium	0.528 mg/L	0.04 mg/L	0.5 mg/L	98%	80-120%	0.2%	0-20%	
	Cadmium	0.4897 mg/L	ND	0.5 mg/L	98%	80-120%	0.3%	0-20%	
	Chromium	0.489 mg/L	ND	0.5 mg/L	98%	80-120%	0.6%	0-20%	
	Copper	0.5032 mg/L	0.014 mg/L	0.5 mg/L	98%	80-120%	1.8%	0-20%	
	Iron	47.8 mg/L	0.058 mg/L	50.5 mg/L	95%	80-120%	0.6%	0-20%	
	Lead	0.461 mg/L	ND	0.5 mg/L	92%	80-120%	0.2%	0-20%	
	Manganese	0.474 mg/L	0.004 mg/L	0.5 mg/L	94%	80-120%	0.4%	0-20%	
	Nickel	0.482 mg/L	0.001 mg/L	0.5 mg/L	96%	80-120%	1.0%	0-20%	
	Selenium	0.5033 mg/L	ND	0.5 mg/L	101%	80-120%	3.6%	0-20%	
	Silver	0.500 mg/L	ND	0.5 mg/L	100%	80-120%	1.0%	0-20%	
	Zinc	0.526 mg/L	0.042 mg/L	0.5 mg/L	97%	80-120%	1.7%	0-20%	

Exide Technologies
Billy King

Case Narrative

Project Name: **Raw Grab Samples**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples**

Receipt temp: **3.6 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD102317-01**
Oxidor Sample ID: **17100612-001**
Collected: **10/23/17 10:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD102317-02**
Oxidor Sample ID: **17100612-002**
Collected: **10/23/17 10:30**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

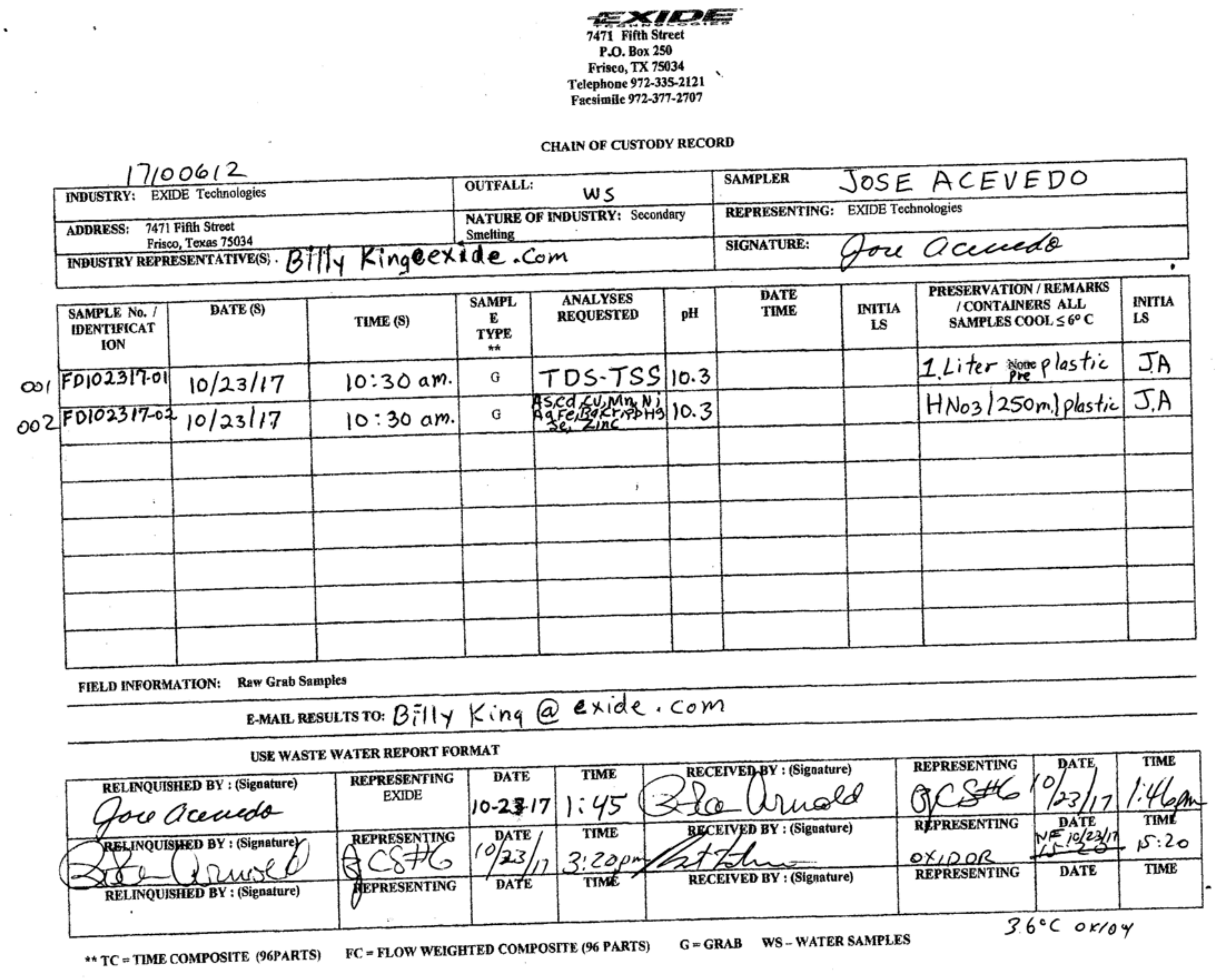
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples**



EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

17100612

INDUSTRY: EXIDE Technologies	OUTFALL: WS	SAMPLER JOSE ACEVEDO
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	NATURE OF INDUSTRY: Secondary Smelting	REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE(S): Billy King@exide.Com		SIGNATURE: Jose Acevedo

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD102317-01	10/23/17	10:30 am.	G	TDS-TSS	10.3			1 Liter None Pre plastic	JA
002	FD102317-02	10/23/17	10:30 am.	G	As, Cd, Cu, Mn, Ni, Ag, Fe, Ba, Cr, Pb, Hg, Se, Zinc	10.3			HNo3 / 250ml plastic	JA

FIELD INFORMATION: Raw Grab Samples

E-MAIL RESULTS TO: Billy King @ exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	10-23-17	1:45	Bela Arnold	QCS#6	10/23/17	1:46pm
Bela Arnold	QCS#6	10/23/17	3:20pm		OXIDOR	~~15:20~~ NE 10/23/17	15:20

3.6°C OK/04

** TC = TIME COMPOSITE (96PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB WS – WATER SAMPLES

OXIDOR Laboratories

Friday, November 03, 2017

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples

Oxidor received 2 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
17100739-001	FD102717-01	Liquid	10/27/2017 10:00	Total Dissolved Solids, Total Suspended Solids
17100739-002	FD102717-02	Liquid	10/27/2017 10:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD102717-01**
Oxidor Sample ID: 17100739-001
Sample Received: 10/27/2017

Matrix: **Liquid**
Sample Collected: **10/27/2017 10:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1440**	mg/L	10/31/17 15:17	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**2.2**	mg/L	10/30/17 10:25	SM-2540-D	K.E.L.	J-5

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples**

Customer Sample ID: **FD102717-02**
Oxidor Sample ID: 17100739-002
Sample Received: 10/27/2017

Matrix: **Liquid**
Sample Collected: **10/27/2017 10:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 11/02/17 at 09:35								
Arsenic	0.003	0.005	**0.003**	mg/L	11/02/17 17:04	200.8	S.M.	J-5
Barium	0.003	0.005	**0.047**	mg/L	11/02/17 17:04	200.8	S.M.	
Cadmium	0.0005	0.001	ND	mg/L	11/02/17 17:04	200.8	S.M.	
Chromium	0.003	0.005	**0.017**	mg/L	11/02/17 17:04	200.8	S.M.	
Copper	0.0025	0.005	**0.0068**	mg/L	11/02/17 17:04	200.8	S.M.	
Iron	0.25	0.5	ND	mg/L	11/02/17 17:04	200.8	S.M.	
Lead	0.003	0.005	**0.008**	mg/L	11/02/17 17:04	200.8	S.M.	
Manganese	0.001	0.002	ND	mg/L	11/02/17 17:04	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	11/02/17 17:04	200.8	S.M.	
Selenium	0.0025	0.005	**0.0154**	mg/L	11/02/17 17:04	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	11/02/17 17:04	200.8	S.M.	
Zinc	0.003	0.005	**0.006**	mg/L	11/02/17 17:04	200.8	S.M.	
Digested by method 245.1 on 10/30/17 at 08:51								
Mercury	0.0001	0.0002	ND	mg/L	10/30/17 15:54	245.1	A.W.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD102717-01	17100739-001	Total Dissolved Solids	SM-2540-C	TDS__01524_L
		Total Suspended Solids	SM-2540-D	TSS__00136_L
FD102717-02	17100739-002	Mercury	245.1	MERC_09939_L
		Zinc	200.8	META_09670_L
		Silver	200.8	META_09670_L
		Selenium	200.8	META_09670_L
		Nickel	200.8	META_09670_L
		Manganese	200.8	META_09670_L
		Lead	200.8	META_09670_L
		Iron	200.8	META_09670_L
		Copper	200.8	META_09670_L
		Chromium	200.8	META_09670_L
		Cadmium	200.8	META_09670_L
		Barium	200.8	META_09670_L
		Arsenic	200.8	META_09670_L

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__01524_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	1010 mg/L		1000 mg/L	101%	90-110%			
LCSD	Total Dissolved Solids	1000 mg/L		1000 mg/L	100%	90-110%	1.0%	0-5%	
Replicate	Total Dissolved Solids	2140 mg/L	2230 mg/L				4.1%	0-5%	
QCBatchID	**TSS__00136_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	438 mg/L		500 mg/L	88%	85-115%			
LCSD	Total Suspended Solids	468 mg/L		500 mg/L	94%	85-115%	6.6%	0-15%	
Replicate	Total Suspended Solids	1.2 mg/L	1.2 mg/L				0.0%	0-15%	
QCBatchID	**MERC_09939_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0093 mg/L		0.01 mg/L	93%	85-115%			
LCSD	Mercury	0.0092 mg/L		0.01 mg/L	92%	85-115%	1.4%	0-25%	
MS	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%			
MSD	Mercury	0.0096 mg/L	ND	0.01 mg/L	96%	80-120%	1.7%	0-25%	
QCBatchID	**META_09670_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.470 mg/L		0.5 mg/L	94%	85-115%			
	Barium	0.482 mg/L		0.5 mg/L	96%	85-115%			
	Cadmium	0.4891 mg/L		0.5 mg/L	98%	85-115%			
	Chromium	0.488 mg/L		0.5 mg/L	98%	85-115%			
	Copper	0.4981 mg/L		0.5 mg/L	100%	85-115%			
	Iron	48.3 mg/L		50.5 mg/L	96%	85-115%			
	Lead	0.470 mg/L		0.5 mg/L	94%	85-115%			
	Manganese	0.460 mg/L		0.5 mg/L	92%	85-115%			
	Nickel	0.468 mg/L		0.5 mg/L	94%	85-115%			
	Selenium	0.4540 mg/L		0.5 mg/L	91%	85-115%			
	Silver	0.500 mg/L		0.5 mg/L	100%	85-115%			
	Zinc	0.502 mg/L		0.5 mg/L	100%	85-115%			
LCSD	Arsenic	0.465 mg/L		0.5 mg/L	93%	85-115%	1.1%	0-20%	
	Barium	0.489 mg/L		0.5 mg/L	98%	85-115%	1.4%	0-20%	

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_09670_L**								
	Cadmium	0.4890 mg/L		0.5 mg/L	98%	85-115%	0.0%	0-20%	
	Chromium	0.484 mg/L		0.5 mg/L	97%	85-115%	0.8%	0-20%	
	Copper	0.4889 mg/L		0.5 mg/L	98%	85-115%	1.9%	0-20%	
	Iron	49.5 mg/L		50.5 mg/L	98%	85-115%	2.5%	0-20%	
	Lead	0.472 mg/L		0.5 mg/L	94%	85-115%	0.4%	0-20%	
	Manganese	0.480 mg/L		0.5 mg/L	96%	85-115%	4.3%	0-20%	
	Nickel	0.475 mg/L		0.5 mg/L	95%	85-115%	1.5%	0-20%	
	Selenium	0.4569 mg/L		0.5 mg/L	91%	85-115%	0.6%	0-20%	
	Silver	0.498 mg/L		0.5 mg/L	100%	85-115%	0.4%	0-20%	
	Zinc	0.488 mg/L		0.5 mg/L	98%	85-115%	2.8%	0-20%	
MS	Arsenic	0.464 mg/L	0.002 mg/L	0.5 mg/L	92%	80-120%			
	Barium	0.578 mg/L	0.081 mg/L	0.5 mg/L	99%	80-120%			
	Cadmium	0.4886 mg/L	ND	0.5 mg/L	98%	80-120%			
	Chromium	0.487 mg/L	0.003 mg/L	0.5 mg/L	97%	80-120%			
	Copper	0.4797 mg/L	ND	0.5 mg/L	96%	80-120%			
	Iron	49.3 mg/L	0.037 mg/L	50.5 mg/L	98%	80-120%			
	Lead	0.476 mg/L	ND	0.5 mg/L	95%	80-120%			
	Manganese	0.471 mg/L	ND	0.5 mg/L	94%	80-120%			
	Nickel	0.466 mg/L	ND	0.5 mg/L	93%	80-120%			
	Selenium	0.4687 mg/L	0.004 mg/L	0.5 mg/L	93%	80-120%			
	Silver	0.501 mg/L	ND	0.5 mg/L	100%	80-120%			
	Zinc	0.491 mg/L	0.002 mg/L	0.5 mg/L	98%	80-120%			
MSD	Arsenic	0.473 mg/L	0.002 mg/L	0.5 mg/L	94%	80-120%	1.9%	0-20%	
	Barium	0.552 mg/L	0.081 mg/L	0.5 mg/L	94%	80-120%	4.6%	0-20%	
	Cadmium	0.4879 mg/L	ND	0.5 mg/L	98%	80-120%	0.1%	0-20%	
	Chromium	0.495 mg/L	0.003 mg/L	0.5 mg/L	98%	80-120%	1.6%	0-20%	
	Copper	0.4931 mg/L	ND	0.5 mg/L	99%	80-120%	2.8%	0-20%	
	Iron	50.5 mg/L	0.037 mg/L	50.5 mg/L	100%	80-120%	2.4%	0-20%	
	Lead	0.469 mg/L	ND	0.5 mg/L	94%	80-120%	1.5%	0-20%	
	Manganese	0.478 mg/L	ND	0.5 mg/L	96%	80-120%	1.5%	0-20%	
	Nickel	0.473 mg/L	ND	0.5 mg/L	95%	80-120%	1.5%	0-20%	
	Selenium	0.4824 mg/L	0.004 mg/L	0.5 mg/L	96%	80-120%	2.9%	0-20%	
	Silver	0.497 mg/L	ND	0.5 mg/L	99%	80-120%	0.8%	0-20%	
	Zinc	0.507 mg/L	0.002 mg/L	0.5 mg/L	101%	80-120%	3.2%	0-20%	

Exide Technologies
Billy King

Case Narrative

Project Name: **Raw Grab Samples**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples**

Receipt temp: **4.1 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD102717-01**
Oxidor Sample ID: **17100739-001**
Collected: **10/27/17 10:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD102717-02**
Oxidor Sample ID: **17100739-002**
Collected: **10/27/17 10:00**
Collected By: **Jose Acevedo**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

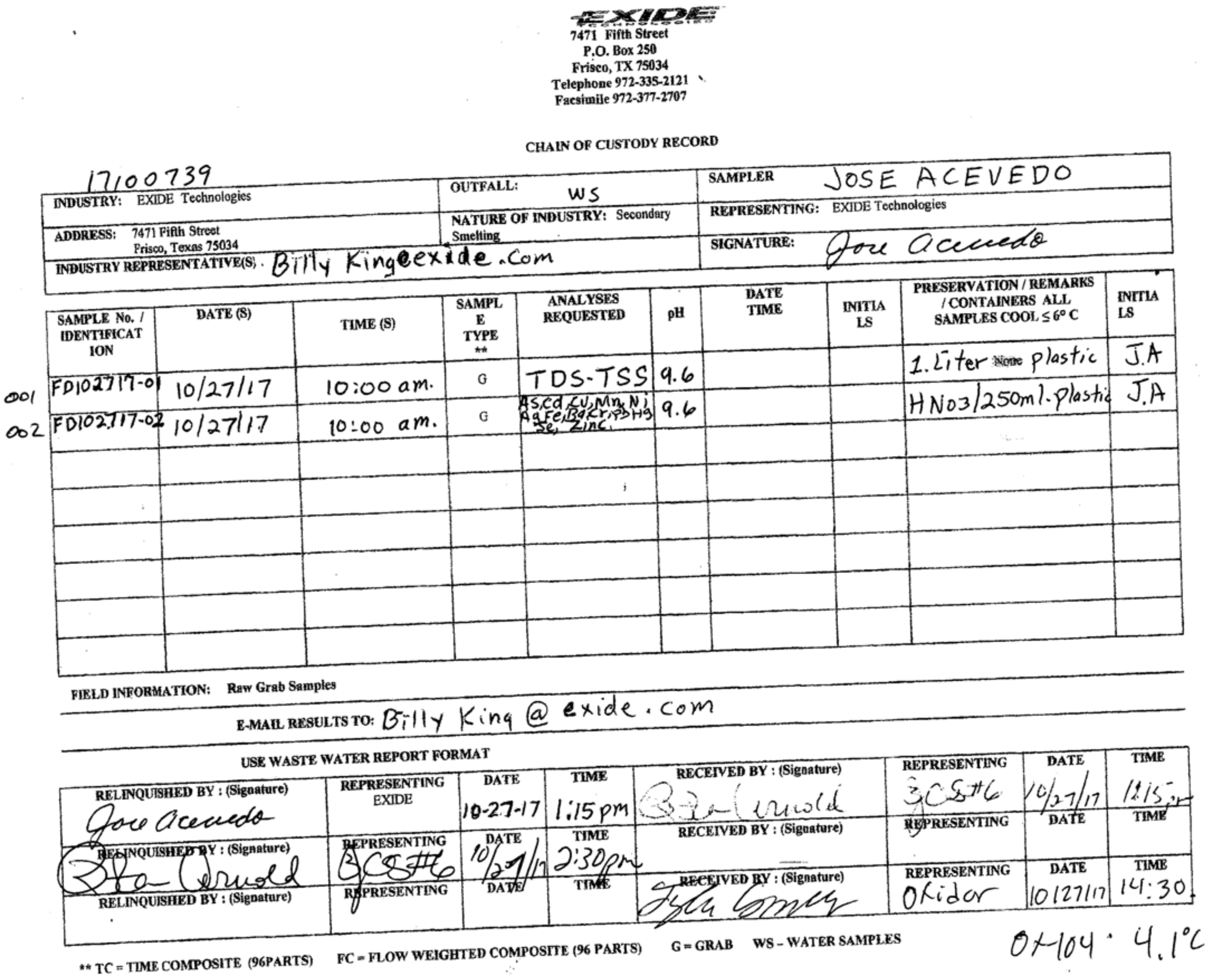
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples**



EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

17100739

INDUSTRY: EXIDE Technologies	OUTFALL: WS	SAMPLER JOSE ACEVEDO
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	NATURE OF INDUSTRY: Secondary Smelting	REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE(S): Billy King@exide.com		SIGNATURE: Jose Acevedo

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INITIALS	PRESERVATION / REMARKS / CONTAINERS ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD102717-01	10/27/17	10:00 am.	G	TDS-TSS	9.6			1. Liter None plastic	J.A
002	FD102717-02	10/27/17	10:00 am.	G	As,Cd,Cu,Mn,Ni Ag,Fe,Ba,Cr,Pb,Hg Se, Zinc.	9.6			HNO3/250ml. plastic	J.A

FIELD INFORMATION: Raw Grab Samples

E-MAIL RESULTS TO: Billy King @ exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
Jose Acevedo	EXIDE	10-27-17	1:15 pm		3CS#6	10/27/17	12:15 pm
RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
	3CS#6	10/27/17	2:30pm				
RELINQUISHED BY : (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY : (Signature)	REPRESENTING	DATE	TIME
					Oxidor	10/27/17	14:30

** TC = TIME COMPOSITE (96PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB WS – WATER SAMPLES

OX-104 · 4.1°C

GOLDER

STATE OF TEXAS
ANNE M FAETH-BOYD
GEOLOGY
12300
LICENSED
PROFESSIONAL GEOSCIENTIST
Anne Faeth-Boyd 5-8-18

May 8, 2018

130208605

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2018 FIRST QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the first quarter 2018. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVTIES

Activities completed during the first quarter 2018 included the following:

Golder Associates Inc.
820 South Main Street, Suite 100 St. Charles, Missouri, USA 63301
T: +1 636 724-9191 | F: +1 636 724-9323

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golder.com

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
    - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
    - Inspect the FDS for sedimentation.
    - Inspect Flood Wall waterstop and joint fillers.
    - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the first quarter 2018 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the first quarter 2018.

A more detailed description of the results of data collection activities and inspections is included in section 3.0 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160331/e20170401/myear).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the first quarter 2018. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart Creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in fourth quarter 2017 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on February 15, 2018, sealant previously used to fill cracks appeared to be in deteriorating condition. Exide was notified and repairs were made as needed. No seepage from the floodwall was observed. The floodwall waterstops and joint fillers were generally in good condition and no major cracks were observed with the exception as noted above.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on February 15, 2018. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the first quarter 2018. Sampling of the French Drain was conducted on February 8, 2018. All analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the first quarter 2018 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

Golder Associates Inc.

Emily White

Emily P. White
Staff Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

STATE OF TEXAS
ANNE M FAETH-BOYD
GEOLOGY
12300
Anne Faeth-Boyd 5-8-18
LICENSED
PROFESSIONAL GEOSCIENTIST

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

EPW/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Jan-18			Feb-18			Mar-18		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
5,110		0.56	15,910		7.18	16,390		2.25
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Monday, January 01, 2018	NR	0.00	Thursday, February 1, 2018	50	0.00	Thursday, March 1, 2018	5,410	0.02
Tuesday, January 02, 2018	NR[1]	0.00	Friday, February 2, 2018	50	0.00	Friday, March 2, 2018	2,790	0.00
Wednesday, January 03, 2018	NR[1]	0.00	Saturday, February 3, 2018	NR	0.00	Saturday, March 3, 2018	580	0.00
Thursday, January 04, 2018	NR[1]	0.00	Sunday, February 4, 2018	NR	0.00	Sunday, March 4, 2018	NR	0.03
Friday, January 05, 2018	1,600	0.00	Monday, February 5, 2018	120	0.00	Monday, March 5, 2018	840	0.00
Saturday, January 06, 2018	NR	0.00	Tuesday, February 6, 2018	40	0.04	Tuesday, March 6, 2018	440	0.00
Sunday, January 07, 2018	NR	0.23	Wednesday, February 7, 2018	1,070	0.01	Wednesday, March 7, 2018	340	0.00
Monday, January 08, 2018	1,220	0.00	Thursday, February 8, 2018	260	0.00	Thursday, March 8, 2018	380	0.00
Tuesday, January 09, 2018	330	0.00	Friday, February 9, 2018	150	0.00	Friday, March 9, 2018	250	0.00
Wednesday, January 10, 2018	150	0.00	Saturday, February 10, 2018	NR	0.03	Saturday, March 10, 2018	NR	0.00
Thursday, January 11, 2018	150	0.00	Sunday, February 11, 2018	NR	0.00	Sunday, March 11, 2018	NR	0.00
Friday, January 12, 2018	NR[1]	0.00	Monday, February 12, 2018	NR[1]	0.00	Monday, March 12, 2018	610	0.00
Saturday, January 13, 2018	NR	0.00	Tuesday, February 13, 2018	350	0.00	Tuesday, March 13, 2018	157	0.00
Sunday, January 14, 2018	NR	0.00	Wednesday, February 14, 2018	60	0.00	Wednesday, March 14, 2018	133	0.00
Monday, January 15, 2018	30	0.00	Thursday, February 15, 2018	70	0.00	Thursday, March 15, 2018	170	0.00
Tuesday, January 16, 2018	NR[1]	0.00	Friday, February 16, 2018	110	0.00	Friday, March 16, 2018	140	0.00
Wednesday, January 17, 2018	NR[1]	0.00	Saturday, February 17, 2018	NR	0.36	Saturday, March 17, 2018	NR	0.15
Thursday, January 18, 2018	NR[1]	0.00	Sunday, February 18, 2018	NR	0.00	Sunday, March 18, 2018	NR	0.00
Friday, January 19, 2018	500	0.00	Monday, February 19, 2018	NR	0.00	Monday, March 19, 2018	670	0.00
Saturday, January 20, 2018	NR	0.00	Tuesday, February 20, 2018	880	2.31	Tuesday, March 20, 2018	150	0.00
Sunday, January 21, 2018	NR	0.23	Wednesday, February 21, 2018	3,550	1.55	Wednesday, March 21, 2018	130	NL
Monday, January 22, 2018	240	0.00	Thursday, February 22, 2018	1,990	0.32	Thursday, March 22, 2018	63	NL
Tuesday, January 23, 2018	60	0.00	Friday, February 23, 2018	3,000	0.55	Friday, March 23, 2018	77	0.00
Wednesday, January 24, 2018	150	0.00	Saturday, February 24, 2018	NR	0.61	Saturday, March 24, 2018	250	0.00
Thursday, January 25, 2018	60	0.00	Sunday, February 25, 2018	NR	0.00	Sunday, March 25, 2018	NR	0.00
Friday, January 26, 2018	60	0.01	Monday, February 26, 2018	2,770	0.00	Monday, March 26, 2018	280	0.00
Saturday, January 27, 2018	NR	0.09	Tuesday, February 27, 2018	660	0.05	Tuesday, March 27, 2018	NR[2]	1.55
Sunday, January 28, 2018	NR	0.00	Wednesday, February 28, 2018	730	1.35	Wednesday, March 28, 2018	1,810	0.50
Monday, January 29, 2018	400	0.00				Thursday, March 29, 2018	720	0.00
Tuesday, January 30, 2018	100	0.00				Friday, March 30, 2018	NR	0.00
Wednesday, January 31, 2018	60	0.00				Saturday, March 31, 2018	NR	0.00

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20160630/e20170701/myear
Daily flow volumes provided by Exide.
NR - Not Recorded.
NL - Not Listed.
[1] Temperatures below freezing, pump did not function.
[2] Pump did not function.

Prepared by: JME 03/03/18, BCW 04/18/18
Checked by: EPW 04/19/2018
Reviewed by: AMF/FMB 04/29/2018

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations

Survey Point	Measurement Date	Elevation (ft msl)
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
			11/27/2017	5.71	626.22
			2/15/2018	5.75	626.18
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
			11/27/2017	6.77	626.74
			2/15/2018	6.77	626.74
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72
			11/27/2017	10.82	625.89
			2/15/2018	10.90	625.81

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32	630.96	2.5-5	1/21/2014	4.16	626.80
(Perched)			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
			11/27/2017	3.54	627.42
			2/15/2018	3.21	627.75
MW-33	632.59	2.5-5	1/21/2014	1.09	631.50
(Perched)			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
			11/27/2017	0.85	631.74
			2/15/2018	0.81	631.78
MW-34	632.83	2.5-5	1/21/2014	4.31	628.52
(Perched)			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
			11/27/2017	3.62	629.21
			2/15/2018	3.71	629.12
MW-35	632.55	2.5-5	1/21/2014	DRY	DRY
(Perched)			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
			11/27/2017	3.98	628.57
			2/15/2018	3.81	628.74
MW-46	630.98	10-20	1/21/2014	5.21	625.77
(Groundwater)			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54
			11/27/2017	5.41	625.57
			2/15/2018	5.81	625.17

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: JME 02/21/2018
Checked by: EPW 04/18/2018
Reviewed by: AMF/FMB 04/29/2018

Table 3
French Drain Water
Analytical Data

	Sample ID FD020918-01 **Laboratory ID** 18020259-001 **Date Collected** 2/8/2018 09:30		**Sample ID** FD020918-02 **Laboratory ID** 18020259-002 **Date Collected** 2/8/2018 09:30	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.004	mg/L
Barium	NA	mg/L	0.033	mg/L
Cadmium	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.014	mg/L
Copper	NA	mg/L	0.0056	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.014	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0100	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.012	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	9.9	mg/L	NA	mg/L
Total Dissolved Solids	880	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: JME 02/21/2018
Checked by: EPW 04/18/2018
Reviewed by: AMF 04/25/2018

LEGEND

● Transect Location
⊕ Monitoring Well Location
🟩 French Drain
🟥 Flood Wall
— Approximate Creek Centerline

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50 25 0 50
Feet

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
0 1 in

OXIDOR Laboratories

Friday, February 16, 2018

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
18020259-001	FD020918-01	Liquid	2/8/2018 09:30	Total Dissolved Solids, Total Suspended Solids
18020259-002	FD020918-02	Liquid	2/8/2018 09:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18020259-003	SO020918-01	Liquid	2/8/2018 09:20	Total Dissolved Solids, Total Suspended Solids
18020259-004	SO020918-02	Liquid	2/8/2018 09:20	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18020259-005	L020918-01	Liquid	2/8/2018 09:10	Total Dissolved Solids, Total Suspended Solids
18020259-006	L020918-02	Liquid	2/8/2018 09:10	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD020918-01**
Oxidor Sample ID: 18020259-001
Sample Received: 2/9/2018

Matrix: **Liquid**
Sample Collected: **2/8/2018 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	50	**880**	mg/L	02/12/18 16:15	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**9.9**	mg/L	02/13/18 09:40	SM-2540-D	K.E.L.	

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD020918-02**
Oxidor Sample ID: 18020259-002
Sample Received: 2/9/2018

Matrix: **Liquid**
Sample Collected: **2/8/2018 09:30**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 02/13/18 at 10:39								
Arsenic	0.003	0.005	**0.004**	mg/L	02/14/18 11:11	200.8	S.M.	J-5
Barium	0.003	0.005	**0.033**	mg/L	02/14/18 11:11	200.8	S.M.	
Cadmium	0.0005	0.001	ND	mg/L	02/14/18 11:11	200.8	S.M.	
Chromium	0.003	0.005	**0.014**	mg/L	02/14/18 11:11	200.8	S.M.	
Copper	0.0025	0.005	**0.0056**	mg/L	02/14/18 11:11	200.8	S.M.	
Iron	0.25	0.5	ND	mg/L	02/14/18 11:11	200.8	S.M.	
Lead	0.003	0.005	**0.014**	mg/L	02/14/18 11:11	200.8	S.M.	
Manganese	0.001	0.002	ND	mg/L	02/14/18 11:11	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	02/14/18 11:11	200.8	S.M.	
Selenium	0.0025	0.005	**0.0100**	mg/L	02/14/18 11:11	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	02/14/18 11:11	200.8	S.M.	
Zinc	0.003	0.005	**0.012**	mg/L	02/14/18 11:11	200.8	S.M.	
Digested by method 245.1 on 02/13/18 at 08:30								
Mercury	0.0001	0.0002	ND	mg/L	02/13/18 14:56	245.1	A.W.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD020918-01	18020259-001	Total Dissolved Solids	SM-2540-C	TDS__01625_L
		Total Suspended Solids	SM-2540-D	TSS__02837_L
FD020918-02	18020259-002	Mercury	245.1	MERC_10840_L
		Arsenic	200.8	META_12671_L
		Selenium	200.8	META_12671_L
		Silver	200.8	META_12671_L
		Zinc	200.8	META_12671_L
		Manganese	200.8	META_12671_L
		Lead	200.8	META_12671_L
		Iron	200.8	META_12671_L
		Copper	200.8	META_12671_L
		Chromium	200.8	META_12671_L
		Nickel	200.8	META_12671_L
		Barium	200.8	META_12671_L
		Cadmium	200.8	META_12671_L
SO020918-01	18020259-003	Total Dissolved Solids	SM-2540-C	TDS__01825_L
		Total Suspended Solids	SM-2540-D	TSS__02837_L
SO020918-02	18020259-004	Mercury	245.1	MERC_10840_L
		Copper	200.8	META_12771_L
		Silver	200.8	META_12771_L
		Selenium	200.8	META_12771_L
		Nickel	200.8	META_12771_L
		Manganese	200.8	META_12771_L
		Iron	200.8	META_12771_L
		Chromium	200.8	META_12771_L
		Zinc	200.8	META_12771_L
		Cadmium	200.8	META_12771_L
		Barium	200.8	META_12771_L
		Arsenic	200.8	META_12771_L
		Lead	200.8	META_12771_L
L020918-01	18020259-005	Total Dissolved Solids	SM-2540-C	TDS__01625_L
		Total Suspended Solids	SM-2540-D	TSS__02837_L
L020918-02	18020259-006	Mercury	245.1	MERC_10840_L
		Lead	200.8	META_12771_L
		Arsenic	200.8	META_12771_L
		Barium	200.8	META_12771_L
		Cadmium	200.8	META_12771_L
		Chromium	200.8	META_12771_L
		Iron	200.8	META_12771_L
		Manganese	200.8	META_12771_L
		Nickel	200.8	META_12771_L
		Selenium	200.8	META_12771_L
		Silver	200.8	META_12771_L
		Zinc	200.8	META_12771_L
		Copper	200.8	META_12771_L

Exide Technologies
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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__01625_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	955 mg/L		1000 mg/L	96%	90-110%			
LCSD	Total Dissolved Solids	955 mg/L		1000 mg/L	96%	90-110%	0.0%	0-5%	
Replicate	Total Dissolved Solids	1040 mg/L	1060 mg/L				1.9%	0-5%	
QCBatchID	**TDS__01825_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	950 mg/L		1000 mg/L	95%	90-110%			
LCSD	Total Dissolved Solids	970 mg/L		1000 mg/L	97%	90-110%	2.1%	0-5%	
Replicate	Total Dissolved Solids	940 mg/L	940 mg/L				0.0%	0-5%	
QCBatchID	**TSS__02837_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	462 mg/L		500 mg/L	92%	85-115%			
LCSD	Total Suspended Solids	453 mg/L		500 mg/L	91%	85-115%	2.0%	0-15%	
Replicate	Total Suspended Solids	218 mg/L	226 mg/L				3.6%	0-15%	
QCBatchID	**MERC_10840_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0100 mg/L		0.01 mg/L	100%	85-115%			
LCSD	Mercury	0.0100 mg/L		0.01 mg/L	100%	85-115%	0.0%	0-25%	
MS	Mercury	0.0098 mg/L	ND	0.01 mg/L	98%	80-120%			
MSD	Mercury	0.0100 mg/L	ND	0.01 mg/L	100%	80-120%	2.0%	0-25%	
QCBatchID	**META_12671_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.096 mg/L		0.1 mg/L	96%	85-115%			
	Barium	0.100 mg/L		0.1 mg/L	100%	85-115%			
	Cadmium	0.0968 mg/L		0.1 mg/L	97%	85-115%			
	Chromium	0.095 mg/L		0.1 mg/L	95%	85-115%			
	Copper	0.0963 mg/L		0.1 mg/L	96%	85-115%			
	Iron	9.74 mg/L		10.1 mg/L	96%	85-115%			
	Lead	0.093 mg/L		0.1 mg/L	93%	85-115%			

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_12671_L**								
	Manganese	0.092 mg/L		0.1 mg/L	92%	85-115%			
	Nickel	0.095 mg/L		0.1 mg/L	95%	85-115%			
	Selenium	0.1008 mg/L		0.1 mg/L	101%	85-115%			
	Silver	0.101 mg/L		0.1 mg/L	101%	85-115%			
	Zinc	0.094 mg/L		0.1 mg/L	94%	85-115%			
LCSD	Arsenic	0.099 mg/L		0.1 mg/L	99%	85-115%	3.1%	0-20%	
	Barium	0.103 mg/L		0.1 mg/L	103%	85-115%	3.0%	0-20%	
	Cadmium	0.0966 mg/L		0.1 mg/L	97%	85-115%	0.2%	0-20%	
	Chromium	0.096 mg/L		0.1 mg/L	96%	85-115%	1.0%	0-20%	
	Copper	0.0985 mg/L		0.1 mg/L	99%	85-115%	2.3%	0-20%	
	Iron	9.86 mg/L		10.1 mg/L	98%	85-115%	1.2%	0-20%	
	Lead	0.093 mg/L		0.1 mg/L	93%	85-115%	0.0%	0-20%	
	Manganese	0.092 mg/L		0.1 mg/L	92%	85-115%	0.0%	0-20%	
	Nickel	0.095 mg/L		0.1 mg/L	95%	85-115%	0.0%	0-20%	
	Selenium	0.0983 mg/L		0.1 mg/L	98%	85-115%	2.5%	0-20%	
	Silver	0.100 mg/L		0.1 mg/L	100%	85-115%	1.0%	0-20%	
	Zinc	0.098 mg/L		0.1 mg/L	98%	85-115%	4.2%	0-20%	
MS	Arsenic	0.493 mg/L	0.004 mg/L	0.5 mg/L	98%	80-120%			
	Barium	0.542 mg/L	0.033 mg/L	0.5 mg/L	102%	80-120%			
	Cadmium	0.4790 mg/L	ND	0.5 mg/L	96%	80-120%			
	Chromium	0.481 mg/L	0.014 mg/L	0.5 mg/L	93%	80-120%			
	Copper	0.4967 mg/L	0.0056 mg/L	0.5 mg/L	98%	80-120%			
	Iron	48.3 mg/L	ND	50.5 mg/L	96%	80-120%			
	Lead	0.474 mg/L	0.014 mg/L	0.5 mg/L	92%	80-120%			
	Manganese	0.453 mg/L	ND	0.5 mg/L	91%	80-120%			
	Nickel	0.466 mg/L	ND	0.5 mg/L	93%	80-120%			
	Selenium	0.5256 mg/L	0.0100 mg/L	0.5 mg/L	103%	80-120%			
	Silver	0.491 mg/L	ND	0.5 mg/L	98%	80-120%			
	Zinc	0.482 mg/L	0.012 mg/L	0.5 mg/L	94%	80-120%			
MSD	Arsenic	0.514 mg/L	0.004 mg/L	0.5 mg/L	102%	80-120%	4.2%	0-20%	
	Barium	0.544 mg/L	0.033 mg/L	0.5 mg/L	102%	80-120%	0.4%	0-20%	
	Cadmium	0.4797 mg/L	ND	0.5 mg/L	96%	80-120%	0.1%	0-20%	
	Chromium	0.496 mg/L	0.014 mg/L	0.5 mg/L	96%	80-120%	3.1%	0-20%	
	Copper	0.5090 mg/L	0.0056 mg/L	0.5 mg/L	101%	80-120%	2.4%	0-20%	
	Iron	49.3 mg/L	ND	50.5 mg/L	98%	80-120%	2.0%	0-20%	
	Lead	0.477 mg/L	0.014 mg/L	0.5 mg/L	93%	80-120%	0.6%	0-20%	
	Manganese	0.461 mg/L	ND	0.5 mg/L	92%	80-120%	1.8%	0-20%	
	Nickel	0.475 mg/L	ND	0.5 mg/L	95%	80-120%	1.9%	0-20%	
	Selenium	0.5185 mg/L	0.0100 mg/L	0.5 mg/L	102%	80-120%	1.4%	0-20%	
	Silver	0.492 mg/L	ND	0.5 mg/L	98%	80-120%	0.2%	0-20%	
	Zinc	0.494 mg/L	0.012 mg/L	0.5 mg/L	96%	80-120%	2.5%	0-20%	
QCBatchID	**META_12771_L**								

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_12771_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.451 mg/L		0.5 mg/L	90%	85-115%			
	Barium	0.466 mg/L		0.5 mg/L	93%	85-115%			
	Cadmium	0.4766 mg/L		0.5 mg/L	95%	85-115%			
	Chromium	0.486 mg/L		0.5 mg/L	97%	85-115%			
	Copper	0.4588 mg/L		0.5 mg/L	92%	85-115%			
	Iron	51.4 mg/L		50.5 mg/L	102%	85-115%			
	Lead	0.466 mg/L		0.5 mg/L	93%	85-115%			
	Manganese	0.479 mg/L		0.5 mg/L	96%	85-115%			
	Nickel	0.479 mg/L		0.5 mg/L	96%	85-115%			
	Selenium	0.4927 mg/L		0.5 mg/L	99%	85-115%			
	Silver	0.484 mg/L		0.5 mg/L	97%	85-115%			
	Zinc	0.472 mg/L		0.5 mg/L	94%	85-115%			
LCSD	Arsenic	0.473 mg/L		0.5 mg/L	95%	85-115%	4.8%	0-20%	
	Barium	0.474 mg/L		0.5 mg/L	95%	85-115%	1.7%	0-20%	
	Cadmium	0.4853 mg/L		0.5 mg/L	97%	85-115%	1.8%	0-20%	
	Chromium	0.494 mg/L		0.5 mg/L	99%	85-115%	1.6%	0-20%	
	Copper	0.4762 mg/L		0.5 mg/L	95%	85-115%	3.7%	0-20%	
	Iron	52.9 mg/L		50.5 mg/L	105%	85-115%	2.9%	0-20%	
	Lead	0.473 mg/L		0.5 mg/L	95%	85-115%	1.5%	0-20%	
	Manganese	0.492 mg/L		0.5 mg/L	98%	85-115%	2.7%	0-20%	
	Nickel	0.483 mg/L		0.5 mg/L	97%	85-115%	0.8%	0-20%	
	Selenium	0.4398 mg/L		0.5 mg/L	88%	85-115%	11.3%	0-20%	
	Silver	0.496 mg/L		0.5 mg/L	99%	85-115%	2.4%	0-20%	
	Zinc	0.496 mg/L		0.5 mg/L	99%	85-115%	5.0%	0-20%	
MS	Arsenic	0.466 mg/L	ND	0.5 mg/L	93%	80-120%			
	Barium	0.472 mg/L	0.007 mg/L	0.5 mg/L	93%	80-120%			
	Cadmium	0.4762 mg/L	ND	0.5 mg/L	95%	80-120%			
	Chromium	0.616 mg/L	0.151 mg/L	0.5 mg/L	93%	80-120%			
	Copper	0.4890 mg/L	0.036 mg/L	0.5 mg/L	91%	80-120%			
	Iron	50.5 mg/L	0.19 mg/L	50.5 mg/L	100%	80-120%			
	Lead	0.477 mg/L	0.003 mg/L	0.5 mg/L	95%	80-120%			

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_12771_L**								
	Manganese	0.471 mg/L	0.007 mg/L	0.5 mg/L	93%	80-120%			
	Nickel	0.483 mg/L	0.027 mg/L	0.5 mg/L	91%	80-120%			
	Selenium	0.4775 mg/L	0.001 mg/L	0.5 mg/L	95%	80-120%			
	Silver	0.482 mg/L	0.003 mg/L	0.5 mg/L	96%	80-120%			
	Zinc	0.491 mg/L	0.030 mg/L	0.5 mg/L	92%	80-120%			
MSD	Arsenic	0.476 mg/L	ND	0.5 mg/L	95%	80-120%	2.1%	0-20%	
	Barium	0.483 mg/L	0.007 mg/L	0.5 mg/L	95%	80-120%	2.3%	0-20%	
	Cadmium	0.4768 mg/L	ND	0.5 mg/L	95%	80-120%	0.1%	0-20%	
	Chromium	0.622 mg/L	0.151 mg/L	0.5 mg/L	94%	80-120%	1.0%	0-20%	
	Copper	0.4985 mg/L	0.036 mg/L	0.5 mg/L	93%	80-120%	1.9%	0-20%	
	Iron	50.3 mg/L	0.19 mg/L	50.5 mg/L	99%	80-120%	0.4%	0-20%	
	Lead	0.485 mg/L	0.003 mg/L	0.5 mg/L	96%	80-120%	1.7%	0-20%	
	Manganese	0.477 mg/L	0.007 mg/L	0.5 mg/L	94%	80-120%	1.3%	0-20%	
	Nickel	0.492 mg/L	0.027 mg/L	0.5 mg/L	93%	80-120%	1.8%	0-20%	
	Selenium	0.4974 mg/L	0.001 mg/L	0.5 mg/L	99%	80-120%	4.1%	0-20%	
	Silver	0.482 mg/L	0.003 mg/L	0.5 mg/L	96%	80-120%	0.0%	0-20%	
	Zinc	0.505 mg/L	0.030 mg/L	0.5 mg/L	95%	80-120%	2.8%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples Quarterly**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Receipt temp: **1.6 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD020918-01**
Oxidor Sample ID: **18020259-001**
Collected: **02/08/18 09:30**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD020918-02**
Oxidor Sample ID: **18020259-002**
Collected: **02/08/18 09:30**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SO020918-01**
Oxidor Sample ID: **18020259-003**
Collected: **02/08/18 09:20**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **SO020918-02**
Oxidor Sample ID: **18020259-004**
Collected: **02/08/18 09:20**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **L020918-01**
Oxidor Sample ID: **18020259-005**
Collected: **02/08/18 09:10**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **L020918-02**
Oxidor Sample ID: **18020259-006**
Collected: **02/08/18 09:10**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**

EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

18020259

INDUSTRY: EXIDE Technologies
OUTFALL: Influent water flows
SAMPLER: Greg Henderson
ADDRESS: 7471 Fifth Street, Frisco, Texas 75034
NATURE OF INDUSTRY: Secondary Smelting
REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE (S): , Eduardo Salazar ,
SIGNATURE:

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INIT IALS	PRESERVATION/ REMARKS/CONTAINERS / ALL SAMPLES COOL ≤ 6° C	INITIALS
-001	FD020918-01	02/08/18	9:30 Am	Grab	TDS-TSS	9.0			None/1 liter	GH
-002	FD020918-02	02/08/18	9:30 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	9.0			HNo3//250ml/plastic	GH
-003	SO020918-01	02/08/18	9:20 Am	Grab	TDS-TSS	7.6			None/1 liter	GH
-004	SO020918-02	02/08/18	9:20 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	7.6			HNo3//250ml/plastic	GH
-005	L020918-01	02/08/18	9:10 Am	Grab	TDS-TSS	12.2			None/1 liter	GH
-006	L020918-02	02/08/18	9:10 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	12.2			HNo3//250ml/plastic	GH

FIELD INFORMATION: Raw Grab Samples Quarterly
E-MAIL RESULTS TO Billy.king@exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY: (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY: (Signature)	REPRESENTING	DATE	TIME
	EXIDE	2-9-18	10:30 Am	Bo Arnold	JCS6	2/9/18	10:30Am
Bo Arnold	JCS6	2/9/18	11:50 Am		OXIDOR	2/9/18	1150

** TC = TIME COMPOSITE (96 PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB

1.6°C
OX101

STATE OF TEXAS
ANNE M FAETH-BOYD
GEOLOGY
12300
Anne Faeth-Boyd 7-10-18
LICENSED PROFESSIONAL GEOSCIENTIST

July 10, 2018 130208605

Brad Weaver
Exide Technologies
7471 5th Street
Frisco, Texas 75034

RE: 2018 SECOND QUARTER FRENCH DRAIN OPERATIONAL REPORT

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 5th Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the second quarter 2018. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously provided to TCEQ.

Golder Associates Inc.
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2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVTIES

Activities completed during the second quarter 2018 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
  - Measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46.
  - Inspect the FDS for sedimentation.
  - Inspect Flood Wall waterstop and joint fillers.
  - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the second quarter 2018 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the second quarter 2018.

A more detailed description of the results of data collection activities and inspections is included in section 3.0 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20180701/mcustom).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the second quarter 2018. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart Creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in first quarter 2018 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on May 9, 2018, erosion was noted in isolated areas along the wall. Exide was notified and repairs were made as needed. No seepage from the floodwall was observed. The floodwall waterstops and joint fillers were generally in good condition and no major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on May 9, 2018. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the second quarter 2018. Sampling of the French Drain was conducted on May 15, 2018. All analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the second quarter 2018 described above, the FDS appears to be operating as designed and preventing discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

Golder Associates Inc.

Emily White

Emily P. White
Staff Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

STATE OF TEXAS
ANNE M FAETH-BOYD
GEOLOGY
12300
LICENSED
PROFESSIONAL GEOSCIENTIST
Anne Faeth-Boyd 7-10-18

Attachments or Enclosures:

Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

EPW/AMF/FMB

Table 1
French Drain Daily Flow Volumes

Apr-18			May-18			Jun-18		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
7,630		1.27	6,300		1.98	4,070		1.12
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Sunday, April 01, 2018	NR	0.00	Tuesday, May 01, 2018	150	0.00	Friday, June 01, 2018	100	0.00
Monday, April 02, 2018	1,340	0.00	Wednesday, May 02, 2018	140	0.00	Saturday, June 02, 2018	NR	0.00
Tuesday, April 03, 2018	380	0.00	Thursday, May 03, 2018	550	0.69	Sunday, June 03, 2018	NR	0.00
Wednesday, April 04, 2018	150	0.00	Friday, May 04, 2018	920	0.65	Monday, June 04, 2018	260	0.30
Thursday, April 05, 2018	170	0.00	Saturday, May 05, 2018	NR	0.00	Tuesday, June 05, 2018	150	0.00
Friday, April 06, 2018	280	0.13	Sunday, May 06, 2018	NR	0.00	Wednesday, June 06, 2018	1,120	0.65
Saturday, April 07, 2018	NR	0.00	Monday, May 07, 2018	670	0.00	Thursday, June 07, 2018	400	0.01
Sunday, April 08, 2018	NR	0.00	Tuesday, May 08, 2018	230	0.00	Friday, June 08, 2018	280	0.00
Monday, April 09, 2018	530	0.00	Wednesday, May 09, 2018	270	0.00	Saturday, June 09, 2018	NR	0.00
Tuesday, April 10, 2018	150	0.00	Thursday, May 10, 2018	180	0.00	Sunday, June 10, 2018	NR	0.00
Wednesday, April 11, 2018	190	0.00	Friday, May 11, 2018	220	0.00	Monday, June 11, 2018	460	0.00
Thursday, April 12, 2018	170	0.00	Saturday, May 12, 2018	NR	0.00	Tuesday, June 12, 2018	140	0.00
Friday, April 13, 2018	150	0.33	Sunday, May 13, 2018	NR	0.00	Wednesday, June 13, 2018	70	0.00
Saturday, April 14, 2018	NR	0.00	Monday, May 14, 2018	400	0.00	Thursday, June 14, 2018	80	0.00
Sunday, April 15, 2018	NR	0.00	Tuesday, May 15, 2018	170	0.00	Friday, June 15, 2018	240	0.00
Monday, April 16, 2018	800	0.00	Wednesday, May 16, 2018	NR[1]	0.00	Saturday, June 16, 2018	NR	0.00
Tuesday, April 17, 2018	290	0.00	Thursday, May 17, 2018	280	0.00	Sunday, June 17, 2018	NR	0.00
Wednesday, April 18, 2018	290	0.00	Friday, May 18, 2018	220	0.04	Monday, June 18, 2018	70	0.00
Thursday, April 19, 2018	60	0.00	Saturday, May 19, 2018	NR	0.00	Tuesday, June 19, 2018	70	0.03
Friday, April 20, 2018	150	0.00	Sunday, May 20, 2018	NR	0.46	Wednesday, June 20, 2018	70	0.06
Saturday, April 21, 2018	NR	0.39	Monday, May 21, 2018	550	0.00	Thursday, June 21, 2018	70	0.00
Sunday, April 22, 2018	NR	0.00	Tuesday, May 22, 2018	200	0.00	Friday, June 22, 2018	170	0.00
Monday, April 23, 2018	670	0.00	Wednesday, May 23, 2018	170	0.00	Saturday, June 23, 2018	NR	0.00
Tuesday, April 24, 2018	160	0.00	Thursday, May 24, 2018	80	0.00	Sunday, June 24, 2018	NR	0.00
Wednesday, April 25, 2018	150	0.41	Friday, May 25, 2018	110	0.12	Monday, June 25, 2018	60	0.07
Thursday, April 26, 2018	750	0.01	Saturday, May 26, 2018	NR	0.02	Tuesday, June 26, 2018	60	0.00
Friday, April 27, 2018	270	0.00	Sunday, May 27, 2018	NR	0.00	Wednesday, June 27, 2018	60	0.00
Saturday, April 28, 2018	NR	0.00	Monday, May 28, 2018	NR	0.00	Thursday, June 28, 2018	50	0.00
Sunday, April 29, 2018	NR	0.00	Tuesday, May 29, 2018	540	0.00	Friday, June 29, 2018	90	0.00
Monday, April 30, 2018	530	0.00	Wednesday, May 30, 2018	130	0.00	Saturday, June 30, 2018	NR	0.00
			Thursday, May 31, 2018	120	0.00			

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20180701/mcustom
Daily flow volumes provided by Exide.
NR - Not Recorded.
[1] Did not pump due to hose movement for on-Site activities.

Prepared by: BCW 07/03/18
Checked by: EPW 07/05/18
Reviewed by: AMF 07/07/18

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
			11/27/2017	5.71	626.22
			2/15/2018	5.75	626.18
			5/9/2018	5.65	626.28

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
			11/27/2017	6.77	626.74
			2/15/2018	6.77	626.74
			5/9/2018	5.95	627.56
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72
			11/27/2017	10.82	625.89
			2/15/2018	10.90	625.81
			5/9/2018	10.19	626.52

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
			11/27/2017	3.54	627.42
			2/15/2018	3.21	627.75
			5/9/2018	3.30	627.66
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
			11/27/2017	0.85	631.74
			2/15/2018	0.81	631.78
			5/9/2018	0.80	631.79
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
			11/27/2017	3.62	629.21
			2/15/2018	3.71	629.12
			5/9/2018	3.57	629.26

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
			11/27/2017	3.98	628.57
			2/15/2018	3.81	628.74
			5/9/2018	3.92	628.63
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54
			11/27/2017	5.41	625.57
			2/15/2018	5.81	625.17
			5/9/2018	4.24	626.74

Notes:

1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.

Prepared by: BCW 06/06/18
Checked by: EPW 07/05/2018
Reviewed by: AMF 07/07/2018

Table 3
French Drain Water
Analytical Data

	Sample ID		**Sample ID**	
	FD051518-01		FD051518-02	
	Laboratory ID		**Laboratory ID**	
	18050389-001		18050389-002	
	Date Collected		**Date Collected**	
	5/15/2018 11:00		5/15/2018 11:00	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.003 J-5	mg/L
Barium	NA	mg/L	0.059	mg/L
Cadmium	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.016	mg/L
Copper	NA	mg/L	0.0074	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.017	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0153	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	0.004 J-5	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	1.0 J-5	mg/L	NA	mg/L
Total Dissolved Solids	20.0	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter

Prepared by: BCW 06/06/18
Checked by: EPW 07/05/18
Reviewed by: AMF 07/07/18

LEGEND

- ● Transect Location
- ⊕ Monitoring Well Location
- 🟩 French Drain
- 🟥 Flood Wall
- — Approximate Creek Centerline

50 25 0 50
Feet

STATE OF TEXAS
ANNE M FAETH-BOYD
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12300
LICENSED
PROFESSIONAL GEOSCIENTIST
Anne Faeth-Boyd 7-10-18

NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	1

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in
0

OXIDOR Laboratories

Tuesday, May 22, 2018

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
18050389-001	FD051518-01	Liquid	5/15/2018 11:00	Total Dissolved Solids, Total Suspended Solids
18050389-002	FD051518-02	Liquid	5/15/2018 11:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18050389-003	SO051518-01	Liquid	5/15/2018 11:15	Total Dissolved Solids, Total Suspended Solids
18050389-004	SO051518-02	Liquid	5/15/2018 11:15	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18050389-005	L051518-01	Liquid	5/15/2018 11:30	Total Dissolved Solids, Total Suspended Solids
18050389-006	L051518-02	Liquid	5/15/2018 11:30	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD051518-01**
Oxidor Sample ID: 18050389-001
Sample Received: 5/16/2018

Matrix: **Liquid**
Sample Collected: **5/15/2018 11:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	500	**1800**	mg/L	05/17/18 16:35	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**2.8**	mg/L	05/17/18 09:45	SM-2540-D	K.E.L.	J-5

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD051518-02**
Oxidor Sample ID: 18050389-002
Sample Received: 5/16/2018
Matrix: **Liquid**
Sample Collected: **5/15/2018 11:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 05/16/18 at 11:41								
Arsenic	0.003	0.005	**0.003**	mg/L	05/17/18 10:52	200.8	S.M.	J-5
Barium	0.003	0.005	**0.059**	mg/L	05/17/18 10:52	200.8	S.M.	
Cadmium	0.0005	0.001	ND	mg/L	05/17/18 10:52	200.8	S.M.	
Chromium	0.003	0.005	**0.016**	mg/L	05/17/18 10:52	200.8	S.M.	
Copper	0.0025	0.005	**0.0074**	mg/L	05/17/18 10:52	200.8	S.M.	
Iron	0.25	0.5	ND	mg/L	05/17/18 10:52	200.8	S.M.	
Lead	0.003	0.005	**0.017**	mg/L	05/17/18 10:52	200.8	S.M.	
Manganese	0.001	0.002	ND	mg/L	05/17/18 10:52	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	05/17/18 10:52	200.8	S.M.	
Selenium	0.0025	0.005	**0.0153**	mg/L	05/17/18 10:52	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	05/17/18 10:52	200.8	S.M.	
Zinc	0.003	0.005	**0.004**	mg/L	05/17/18 10:52	200.8	S.M.	J-5
Digested by method 245.1 on 05/17/18 at 08:41								
Mercury	0.0001	0.0002	ND	mg/L	05/17/18 16:35	245.1	L.Z.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD051518-01	18050389-001	Total Dissolved Solids	SM-2540-C	TDS__05725_L
		Total Suspended Solids	SM-2540-D	TSS__01038_L
FD051518-02	18050389-002	Mercury	245.1	MERC_22240_L
		Arsenic	200.8	META_08572_L
		Selenium	200.8	META_08572_L
		Silver	200.8	META_08572_L
		Zinc	200.8	META_08572_L
		Manganese	200.8	META_08572_L
		Lead	200.8	META_08572_L
		Iron	200.8	META_08572_L
		Copper	200.8	META_08572_L
		Chromium	200.8	META_08572_L
		Nickel	200.8	META_08572_L
		Barium	200.8	META_08572_L
		Cadmium	200.8	META_08572_L
SO051518-01	18050389-003	Total Dissolved Solids	SM-2540-C	TDS__05725_L
		Total Suspended Solids	SM-2540-D	TSS__01038_L
SO051518-02	18050389-004	Mercury	245.1	MERC_22240_L
		Copper	200.8	META_08572_L
		Silver	200.8	META_08572_L
		Selenium	200.8	META_08572_L
		Nickel	200.8	META_08572_L
		Manganese	200.8	META_08572_L
		Iron	200.8	META_08572_L
		Chromium	200.8	META_08572_L
		Zinc	200.8	META_08572_L
		Cadmium	200.8	META_08572_L
		Barium	200.8	META_08572_L
		Arsenic	200.8	META_08572_L
		Lead	200.8	META_08572_L
L051518-01	18050389-005	Total Dissolved Solids	SM-2540-C	TDS__05725_L
		Total Suspended Solids	SM-2540-D	TSS__01038_L
L051518-02	18050389-006	Mercury	245.1	MERC_22540_L
		Lead	200.8	META_08572_L
		Arsenic	200.8	META_08572_L
		Barium	200.8	META_08572_L
		Cadmium	200.8	META_08572_L
		Chromium	200.8	META_08572_L
		Iron	200.8	META_08572_L
		Manganese	200.8	META_08572_L
		Nickel	200.8	META_08572_L
		Selenium	200.8	META_08572_L
		Silver	200.8	META_08572_L
		Zinc	200.8	META_08572_L
		Copper	200.8	META_08572_L

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__05725_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	975 mg/L		1000 mg/L	98%	90-110%			
LCSD	Total Dissolved Solids	990 mg/L		1000 mg/L	99%	90-110%	1.5%	0-5%	
Replicate	Total Dissolved Solids	865 mg/L	890 mg/L				2.8%	0-5%	
QCBatchID	**TSS__01038_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	457 mg/L		500 mg/L	91%	85-115%			
LCSD	Total Suspended Solids	472 mg/L		500 mg/L	94%	85-115%	3.2%	0-15%	
Replicate	Total Suspended Solids	208 mg/L	210 mg/L				1.2%	0-15%	
QCBatchID	**MERC_22240_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0094 mg/L		0.01 mg/L	94%	85-115%			
LCSD	Mercury	0.0087 mg/L		0.01 mg/L	87%	85-115%	8.1%	0-25%	
MS	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%			
MSD	Mercury	0.0086 mg/L	ND	0.01 mg/L	86%	80-120%	9.4%	0-25%	
QCBatchID	**MERC_22540_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0096 mg/L		0.01 mg/L	96%	85-115%			
LCSD	Mercury	0.0096 mg/L		0.01 mg/L	96%	85-115%	0.3%	0-25%	
MS	Mercury	0.0097 mg/L	ND	0.01 mg/L	97%	80-120%			
MSD	Mercury	0.0097 mg/L	ND	0.01 mg/L	97%	80-120%	0.0%	0-25%	
QCBatchID	**META_08572_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.494 mg/L		0.5 mg/L	99%	85-115%			
	Barium	0.491 mg/L		0.5 mg/L	98%	85-115%			
	Cadmium	0.5038 mg/L		0.5 mg/L	101%	85-115%			
	Chromium	0.505 mg/L		0.5 mg/L	101%	85-115%			
	Copper	0.4922 mg/L		0.5 mg/L	98%	85-115%			
	Iron	51.4 mg/L		50.5 mg/L	102%	85-115%			

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_08572_L**								
	Lead	0.491 mg/L		0.5 mg/L	98%	85-115%			
	Manganese	0.479 mg/L		0.5 mg/L	96%	85-115%			
	Nickel	0.491 mg/L		0.5 mg/L	98%	85-115%			
	Selenium	0.4738 mg/L		0.5 mg/L	95%	85-115%			
	Silver	0.509 mg/L		0.5 mg/L	102%	85-115%			
	Zinc	0.491 mg/L		0.5 mg/L	98%	85-115%			
LCSD	Arsenic	0.496 mg/L		0.5 mg/L	99%	85-115%	0.4%	0-20%	
	Barium	0.493 mg/L		0.5 mg/L	99%	85-115%	0.4%	0-20%	
	Cadmium	0.5005 mg/L		0.5 mg/L	100%	85-115%	0.7%	0-20%	
	Chromium	0.507 mg/L		0.5 mg/L	101%	85-115%	0.4%	0-20%	
	Copper	0.4988 mg/L		0.5 mg/L	100%	85-115%	1.3%	0-20%	
	Iron	52.3 mg/L		50.5 mg/L	104%	85-115%	1.7%	0-20%	
	Lead	0.487 mg/L		0.5 mg/L	97%	85-115%	0.8%	0-20%	
	Manganese	0.482 mg/L		0.5 mg/L	96%	85-115%	0.6%	0-20%	
	Nickel	0.497 mg/L		0.5 mg/L	99%	85-115%	1.2%	0-20%	
	Selenium	0.5024 mg/L		0.5 mg/L	101%	85-115%	5.9%	0-20%	
	Silver	0.512 mg/L		0.5 mg/L	102%	85-115%	0.6%	0-20%	
	Zinc	0.495 mg/L		0.5 mg/L	99%	85-115%	0.8%	0-20%	
MS	Arsenic	0.510 mg/L	0.008 mg/L	0.5 mg/L	100%	80-120%			
	Barium	0.517 mg/L	0.027 mg/L	0.5 mg/L	98%	80-120%			
	Cadmium	0.4953 mg/L	ND	0.5 mg/L	99%	80-120%			
	Chromium	0.511 mg/L	ND	0.5 mg/L	102%	80-120%			
	Copper	0.4985 mg/L	0.009 mg/L	0.5 mg/L	98%	80-120%			
	Iron	53.4 mg/L	0.05 mg/L	50.5 mg/L	106%	80-120%			
	Lead	0.513 mg/L	0.026 mg/L	0.5 mg/L	97%	80-120%			
	Manganese	0.499 mg/L	0.011 mg/L	0.5 mg/L	98%	80-120%			
	Nickel	0.498 mg/L	0.001 mg/L	0.5 mg/L	99%	80-120%			
	Selenium	0.4980 mg/L	0.0029 mg/L	0.5 mg/L	99%	80-120%			
	Silver	0.499 mg/L	ND	0.5 mg/L	100%	80-120%			
	Zinc	0.491 mg/L	ND	0.5 mg/L	98%	80-120%			
MSD	Arsenic	0.501 mg/L	0.008 mg/L	0.5 mg/L	99%	80-120%	1.8%	0-20%	
	Barium	0.538 mg/L	0.027 mg/L	0.5 mg/L	102%	80-120%	4.0%	0-20%	
	Cadmium	0.4948 mg/L	ND	0.5 mg/L	99%	80-120%	0.1%	0-20%	
	Chromium	0.506 mg/L	ND	0.5 mg/L	101%	80-120%	1.0%	0-20%	
	Copper	0.4962 mg/L	0.009 mg/L	0.5 mg/L	97%	80-120%	0.5%	0-20%	
	Iron	52.8 mg/L	0.05 mg/L	50.5 mg/L	105%	80-120%	1.1%	0-20%	
	Lead	0.514 mg/L	0.026 mg/L	0.5 mg/L	98%	80-120%	0.2%	0-20%	
	Manganese	0.497 mg/L	0.011 mg/L	0.5 mg/L	97%	80-120%	0.4%	0-20%	
	Nickel	0.498 mg/L	0.001 mg/L	0.5 mg/L	99%	80-120%	0.0%	0-20%	
	Selenium	0.4898 mg/L	0.0029 mg/L	0.5 mg/L	97%	80-120%	1.7%	0-20%	
	Silver	0.502 mg/L	ND	0.5 mg/L	100%	80-120%	0.6%	0-20%	
	Zinc	0.490 mg/L	ND	0.5 mg/L	98%	80-120%	0.2%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples Quarterly**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

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Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Receipt temp: **1.4 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD051518-01**
Oxidor Sample ID: **18050389-001**
Collected: **05/15/18 11:00**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD051518-02**
Oxidor Sample ID: **18050389-002**
Collected: **05/15/18 11:00**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SO051518-01**
Oxidor Sample ID: **18050389-003**
Collected: **05/15/18 11:15**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **SO051518-02**
Oxidor Sample ID: **18050389-004**
Collected: **05/15/18 11:15**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **L051518-01**
Oxidor Sample ID: **18050389-005**
Collected: **05/15/18 11:30**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Exide Technologies
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Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **L051518-02**
Oxidor Sample ID: **18050389-006**
Collected: **05/15/18 11:30**

Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**

EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

Blue +White

CHAIN OF CUSTODY RECORD

18050389

INDUSTRY: EXIDE Technologies	OUTFALL: Influent water flows	SAMPLER: Greg Henderson
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	NATURE OF INDUSTRY: Secondary Smelting	REPRESENTING: EXIDE Technologies
INDUSTRY REPRESENTATIVE (S): , Eduardo Salazar ,		SIGNATURE:

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INIT IALS	PRESERVATION/ REMARKS/CONTAINERS / ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD051518-01	5-15-18	11:00 AM	Grab	TDS-TSS	11.0	5-15-18/11:00Am	GH	None/1 liter	GH
002	FD051518-02	5-15-18	11:00 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	11.0	5-15-18/11:00Am	GH	HNo3//250ml/plastic	GH
003	SO051518-01	5-15-18	11:15 AM	Grab	TDS-TSS	6.0	5-15-18/11:15 Am	GH	None/1 liter	GH
004	SO051518-02	5-15-18	11:15 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	6.0	5-15-18/11:15 Am	GH	HNo3//250ml/plastic	GH
005	L051518-01	5-15-18	11:30 Am	Grab	TDS-TSS.	13.4	5-15-18/11:30 Am	GH	None/1 liter	GH
006	L051518-02	5-15-18	11:30 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	13.4	5-15-18/11:30 Am	GH	HNo3//250ml/plastic	GH

FIELD INFORMATION: Raw Grab Samples Quarterly

E-MAIL RESULTS TO Billy.king@exide.com

USE WASTE WATER REPORT FORMAT

QUARTERLY

RELINQUISHED BY: (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY: (Signature)	REPRESENTING	DATE	TIME
	EXIDE	5-16-18	9:25 Am	Rita Arnold	JCS6	5/16/18	9:25am
Rita Arnold	JCS6	5/16/18	10:30 Am		OXIDOR	5/16/18	1030

** TC = TIME COMPOSITE (96 PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB

1.4°C
OX104

December 28, 2018 Project No. 130208605

Brad Weaver
Exide Technologies
7471 Fifth Street
Frisco, Texas 75034

RE: 2018 THIRD QUARTER FRENCH DRAIN OPERATIONAL REPORT, EXIDE TECHNOLOGIES, INC., 7471 FIFTH STREET, FRISCO, TEXAS

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 Fifth Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the third quarter 2018. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously

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provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the third quarter 2018 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
    - Inspect the FDS for sedimentation.
    - Inspect Flood Wall waterstop and joint fillers.
    - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the third quarter 2018 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

Golder was not able to measure and record water levels in nearby perched and groundwater monitoring wells MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-36 as wells were not accessible due to flooding at the time of the quarterly inspection.

A more detailed description of the results of data collection activities and inspections is included in section 3.0 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20180701/mcustom).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were not measured during the third quarter 2018 due to access limited by Site conditions as described above. Table 2 summarizes the groundwater depths and elevations from previous events and includes the elevations of the banks and bottom of Stewart Creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1.

3.3 Floodwall Seepage

At the time of the wall inspection on September 24, 2018, standing water was present on the plant side of the flood wall. Seepage and cracks were observed along the flood wall. Water was also noted to be seeping from beneath the footer of the wall and was discharging to Stewart Creek. Exide collected samples of this water and reported the release to TCEQ. Golder and Exide personnel walked the length of the wall and performed a detailed inspection. Notes were made as to where repairs were to be made once water receded. These repairs were subsequently made by Exide after water receded.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on September 24, 2018. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the third quarter 2018. Sampling of the French Drain was conducted on August 28, 2018. All analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on Site conditions discussed above, Golder was unable to assess performance of the FDS during the inspection on September 24, 2018; however, members of Golder were on-Site for Site investigations in July and August 2018 and observed the FDS in good working condition. Discussions with and documentation from Exide personnel report no issues with the FDS and the system appears to be operating as designed and preventing major discharges to Stewart Creek.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Emily White

Emily P. White
Staff Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

EPW/AMF/FMB

Attachments:
- Table 1: French Drain Daily Flow Volumes
- Table 2: Perched and Groundwater Monitoring Well Water Elevations
- Table 3: French Drain Water Analytical Data
- Figure 1: Stewart Creek Transects
- Attachment A: French Drain Water Laboratory Analytical Results

Table 1
French Drain Daily Flow Volumes

Jul-18			Aug-18			Sep-18		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
1,800		0.38	11,660		3.60	6,340		11.93
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Sunday, July 01, 2018	NR	0.00	Wednesday, August 01, 2018	0[1]	0.00	Saturday, September 01, 2018	NR	0.00
Monday, July 02, 2018	90	0.00	Thursday, August 02, 2018	50	0.00	Sunday, September 02, 2018	NR	0.00
Tuesday, July 03, 2018	60	0.00	Friday, August 03, 2018	50	0.00	Monday, September 03, 2018	NR	0.52
Wednesday, July 04, 2018	NR	0.00	Saturday, August 04, 2018	NR	0.00	Tuesday, September 04, 2018	810	0.00
Thursday, July 05, 2018	110	0.00	Sunday, August 05, 2018	NR	0.00	Wednesday, September 05, 2018	140	0.31
Friday, July 06, 2018	50	0.00	Monday, August 06, 2018	60	0.00	Thursday, September 06, 2018	340	0.61
Saturday, July 07, 2018	NR	0.00	Tuesday, August 07, 2018	40	0.00	Friday, September 07, 2018	450	0.72
Sunday, July 08, 2018	NR	0.00	Wednesday, August 08, 2018	0[1]	0.00	Saturday, September 08, 2018	NR	1.41
Monday, July 09, 2018	90	0.30	Thursday, August 09, 2018	130	0.62	Sunday, September 09, 2018	NR	0.02
Tuesday, July 10, 2018	140	0.00	Friday, August 10, 2018	840	0.00	Monday, September 10, 2018	1,820	0.09
Wednesday, July 11, 2018	140	0.00	Saturday, August 11, 2018	NR	0.78	Tuesday, September 11, 2018	400	0.04
Thursday, July 12, 2018	70	0.04	Sunday, August 12, 2018	NR	0.05	Wednesday, September 12, 2018	260	0.01
Friday, July 13, 2018	0[2]	0.00	Monday, August 13, 2018	1,620	1.52	Thursday, September 13, 2018	240	0.00
Saturday, July 14, 2018	NR	0.00	Tuesday, August 14, 2018	680	0.25	Friday, September 14, 2018	150	0.43
Sunday, July 15, 2018	NR	0.00	Wednesday, August 15, 2018	340	0.00	Saturday, September 15, 2018	NR	0.00
Monday, July 16, 2018	320	0.00	Thursday, August 16, 2018	260	0.00	Sunday, September 16, 2018	NR	0.00
Tuesday, July 17, 2018	70	0.00	Friday, August 17, 2018	160	0.00	Monday, September 17, 2018	920	0.00
Wednesday, July 18, 2018	70	0.00	Saturday, August 18, 2018	NR	0.38	Tuesday, September 18, 2018	150	0.00
Thursday, July 19, 2018	60	0.00	Sunday, August 19, 2018	NR	0.00	Wednesday, September 19, 2018	150	0.00
Friday, July 20, 2018	60	0.00	Monday, August 20, 2018	5,710	0.00	Thursday, September 20, 2018	160	0.03
Saturday, July 21, 2018	NR	0.00	Tuesday, August 21, 2018	290	0.00	Friday, September 21, 2018	350	3.98
Sunday, July 22, 2018	NR	0.00	Wednesday, August 22, 2018	220	0.00	Saturday, September 22, 2018	NR	3.02
Monday, July 23, 2018	160	0.00	Thursday, August 23, 2018	260	0.00	Sunday, September 23, 2018	NR	0.09
Tuesday, July 24, 2018	50	0.00	Friday, August 24, 2018	150	0.00	Monday, September 24, 2018	0[3]	0.01
Wednesday, July 25, 2018	60	0.00	Saturday, August 25, 2018	NR	0.00	Tuesday, September 25, 2018	0[3]	0.00
Thursday, July 26, 2018	0[1]	0.00	Sunday, August 26, 2018	NR	0.00	Wednesday, September 26, 2018	0[3]	0.19
Friday, July 27, 2018	0[1]	0.00	Monday, August 27, 2018	340	0.00	Thursday, September 27, 2018	0[3]	0.00
Saturday, July 28, 2018	NR	0.00	Tuesday, August 28, 2018	170	0.00	Friday, September 28, 2018	0[3]	0.00
Sunday, July 29, 2018	NR	0.00	Wednesday, August 29, 2018	70	0.00	Saturday, September 29, 2018	NR	0.45
Monday, July 30, 2018	150	0.04	Thursday, August 30, 2018	80	0.00	Sunday, September 30, 2018	NR	0.00
Tuesday, July 31, 2018	50	0.00	Friday, August 31, 2018	140	0.00			

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20180701/mcustom
Daily flow volumes provided by Exide.
NR - Not Recorded.
[1] Not enough water to pump.
[2] Did not pump; line disconnected and moved for drilling activites at Site.
[3] Did not pump; water over top of french drain because of amount of rainfall at the Site.

Prepared by: SJD 10/05/2018
Checked by: EPW 10/25/2018
Reviewed by: AMF 12/14/2018

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
			11/27/2017	5.71	626.22
			2/15/2018	5.75	626.18
			5/9/2018	5.65	626.28
			9/24/2018	NA	NA

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
			11/27/2017	6.77	626.74
			2/15/2018	6.77	626.74
			5/9/2018	5.95	627.56
			9/24/2018	NA	NA
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72
			11/27/2017	10.82	625.89
			2/15/2018	10.90	625.81
			5/9/2018	10.19	626.52
			9/24/2018	NA	NA

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
			11/27/2017	3.54	627.42
			2/15/2018	3.21	627.75
			5/9/2018	3.30	627.66
			9/24/2018	NA	NA
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
			11/27/2017	0.85	631.74
			2/15/2018	0.81	631.78
			5/9/2018	0.80	631.79
			9/24/2018	NA	NA
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
			11/27/2017	3.62	629.21
			2/15/2018	3.71	629.12
			5/9/2018	3.57	629.26
			9/24/2018	NA	NA

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
			11/27/2017	3.98	628.57
			2/15/2018	3.81	628.74
			5/9/2018	3.92	628.63
			9/24/2018	NA	NA
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54
			11/27/2017	5.41	625.57
			2/15/2018	5.81	625.17
			5/9/2018	4.24	626.74
			9/24/2018	NA	NA

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.
5. NA - not accessible due to Site conditions.

Prepared by: SJD 10/05/2018
Checked by: EPW 10/25/2018
Reviewed by: AMF 12/14/2018

Table 3
French Drain Water
Analytical Data

	Sample ID FD082818-01		**Sample ID** FD082818-02	
	Laboratory ID 18080631-001		**Laboratory ID** 18080631-002	
	Date Collected 8/28/2018 08:00		**Date Collected** 8/28/2018 08:00	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Antimony	NA	mg/L	NA	mg/L
Arsenic	NA	mg/L	0.003 J-5	mg/L
Barium	NA	mg/L	0.061	mg/L
Cadmium	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.020	mg/L
Copper	NA	mg/L	0.0118	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.008	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0150	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	ND	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	1.5 J-5	mg/L	NA	mg/L
Total Dissolved Solids	1,080	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter
4) J-5 - the associated concentration is an estimated value between the sample detection limit and the adjusted method quantitation limit.

Prepared by: SJD 09/19/2018
Checked by: EPW 10/25/2018
Reviewed by: AMF 12/14/2018

LEGEND

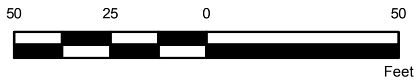
● Transect Location

⊕ Monitoring Well Location

🟩 French Drain

🟥 Flood Wall

— Approximate Creek Centerline



NOTE(S)

1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
Golder Associates

YYYY-MM-DD	2016-10-31
DESIGNED	JWT
PREPARED	JWT
REVIEWED	BEF
APPROVED	FMB

PROJECT NO.	CONTROL	REV.	FIGURE
13-02086	1302086Y002.mxd	0	**1**

PATH: \\Jacksonville\Drafting\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B
1 in
0

Wednesday, September 05, 2018

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
18080631-001	FD082818-01	Liquid	8/28/2018 08:00	Total Dissolved Solids, Total Suspended Solids
18080631-002	FD082818-02	Liquid	8/28/2018 08:00	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18080631-003	SO082818-01	Liquid	8/28/2018 08:20	Total Dissolved Solids, Total Suspended Solids
18080631-004	SO082818-02	Liquid	8/28/2018 08:20	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18080631-005	LO082818-01	Liquid	8/28/2018 08:35	Total Dissolved Solids, Total Suspended Solids
18080631-006	LO082818-02	Liquid	8/28/2018 08:35	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD082818-01**
Oxidor Sample ID: 18080631-001
Sample Received: 8/28/2018
Matrix: **Liquid**
Sample Collected: **8/28/2018 08:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1080**	mg/L	08/28/18 15:55	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**1.5**	mg/L	08/30/18 11:00	SM-2540-D	K.E.L.	J-5

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD082818-02**
Oxidor Sample ID: 18080631-002
Sample Received: 8/28/2018

Matrix: **Liquid**
Sample Collected: **8/28/2018 08:00**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 08/29/18 at 09:03								
Arsenic	0.003	0.005	**0.003**	mg/L	08/29/18 15:53	200.8	S.M.	J-5
Barium	0.003	0.005	**0.061**	mg/L	08/29/18 15:53	200.8	S.M.	
Cadmium	0.0005	0.001	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Chromium	0.003	0.005	**0.020**	mg/L	08/29/18 15:53	200.8	S.M.	
Copper	0.0025	0.005	**0.0118**	mg/L	08/29/18 15:53	200.8	S.M.	
Iron	0.25	0.5	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Lead	0.003	0.005	**0.008**	mg/L	08/29/18 15:53	200.8	S.M.	
Manganese	0.001	0.002	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Selenium	0.0025	0.005	**0.0150**	mg/L	08/29/18 15:53	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Zinc	0.003	0.005	ND	mg/L	08/29/18 15:53	200.8	S.M.	
Digested by method 245.1 on 08/29/18 at 08:56								
Mercury	0.0001	0.0002	ND	mg/L	08/29/18 15:12	245.1	L.Z.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD082818-01	18080631-001	Total Dissolved Solids	SM-2540-C	TDS__09425_L
		Total Suspended Solids	SM-2540-D	TSS__11238_L
FD082818-02	18080631-002	Mercury	245.1	MERC_07841_L
		Arsenic	200.8	META_02473_L
		Selenium	200.8	META_02473_L
		Silver	200.8	META_02473_L
		Zinc	200.8	META_02473_L
		Manganese	200.8	META_02473_L
		Lead	200.8	META_02473_L
		Iron	200.8	META_02473_L
		Copper	200.8	META_02473_L
		Chromium	200.8	META_02473_L
		Nickel	200.8	META_02473_L
		Barium	200.8	META_02473_L
		Cadmium	200.8	META_02473_L
SO082818-01	18080631-003	Total Dissolved Solids	SM-2540-C	TDS__09525_L
		Total Suspended Solids	SM-2540-D	TSS__11238_L
SO082818-02	18080631-004	Mercury	245.1	MERC_07841_L
		Copper	200.8	META_02473_L
		Silver	200.8	META_02473_L
		Selenium	200.8	META_02473_L
		Nickel	200.8	META_02473_L
		Manganese	200.8	META_02473_L
		Iron	200.8	META_02473_L
		Chromium	200.8	META_02473_L
		Zinc	200.8	META_02473_L
		Cadmium	200.8	META_02473_L
		Barium	200.8	META_02473_L
		Arsenic	200.8	META_02473_L
		Lead	200.8	META_02473_L
LO082818-01	18080631-005	Total Dissolved Solids	SM-2540-C	TDS__09525_L
		Total Suspended Solids	SM-2540-D	TSS__11238_L
LO082818-02	18080631-006	Mercury	245.1	MERC_07841_L
		Lead	200.8	META_02473_L
		Arsenic	200.8	META_02473_L
		Barium	200.8	META_02473_L
		Cadmium	200.8	META_02473_L
		Chromium	200.8	META_02473_L
		Iron	200.8	META_02473_L
		Manganese	200.8	META_02473_L
		Nickel	200.8	META_02473_L
		Selenium	200.8	META_02473_L
		Silver	200.8	META_02473_L
		Zinc	200.8	META_02473_L
		Copper	200.8	META_02473_L

Exide Technologies
Billy King

QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__09425_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	985 mg/L		1000 mg/L	99%	90-110%			
LCSD	Total Dissolved Solids	995 mg/L		1000 mg/L	100%	90-110%	1.0%	0-5%	
Replicate	Total Dissolved Solids	2460 mg/L	2460 mg/L				0.2%	0-5%	
QCBatchID	**TDS__09525_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	995 mg/L		1000 mg/L	100%	90-110%			
LCSD	Total Dissolved Solids	1000 mg/L		1000 mg/L	100%	90-110%	0.5%	0-5%	
Replicate	Total Dissolved Solids	3880 mg/L	3950 mg/L				1.8%	0-5%	
QCBatchID	**TSS__11238_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	466 mg/L		500 mg/L	93%	85-115%			
LCSD	Total Suspended Solids	467 mg/L		500 mg/L	93%	85-115%	0.2%	0-15%	
Replicate	Total Suspended Solids	144 mg/L	148 mg/L				2.7%	0-15%	
QCBatchID	**MERC_07841_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0094 mg/L		0.01 mg/L	94%	85-115%			
LCSD	Mercury	0.0094 mg/L		0.01 mg/L	94%	85-115%	0.2%	0-25%	
MS	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%			
MSD	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%	0.3%	0-25%	
QCBatchID	**META_02473_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.100 mg/L		0.1 mg/L	100%	85-115%			
	Barium	0.102 mg/L		0.1 mg/L	102%	85-115%			
	Cadmium	0.0969 mg/L		0.1 mg/L	97%	85-115%			
	Chromium	0.096 mg/L		0.1 mg/L	96%	85-115%			
	Copper	0.0971 mg/L		0.1 mg/L	97%	85-115%			
	Iron	10.1 mg/L		10.1 mg/L	100%	85-115%			
	Lead	0.093 mg/L		0.1 mg/L	93%	85-115%			

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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_02473_L**								
	Manganese	0.095 mg/L		0.1 mg/L	95%	85-115%			
	Nickel	0.098 mg/L		0.1 mg/L	98%	85-115%			
	Selenium	0.0995 mg/L		0.1 mg/L	100%	85-115%			
	Silver	0.097 mg/L		0.1 mg/L	97%	85-115%			
	Zinc	0.100 mg/L		0.1 mg/L	100%	85-115%			
LCSD	Arsenic	0.098 mg/L		0.1 mg/L	98%	85-115%	2.0%	0-20%	
	Barium	0.101 mg/L		0.1 mg/L	101%	85-115%	1.0%	0-20%	
	Cadmium	0.0972 mg/L		0.1 mg/L	97%	85-115%	0.3%	0-20%	
	Chromium	0.097 mg/L		0.1 mg/L	97%	85-115%	1.0%	0-20%	
	Copper	0.0968 mg/L		0.1 mg/L	97%	85-115%	0.3%	0-20%	
	Iron	10.1 mg/L		10.1 mg/L	100%	85-115%	0.0%	0-20%	
	Lead	0.093 mg/L		0.1 mg/L	93%	85-115%	0.0%	0-20%	
	Manganese	0.096 mg/L		0.1 mg/L	96%	85-115%	1.0%	0-20%	
	Nickel	0.097 mg/L		0.1 mg/L	97%	85-115%	1.0%	0-20%	
	Selenium	0.0984 mg/L		0.1 mg/L	98%	85-115%	1.1%	0-20%	
	Silver	0.097 mg/L		0.1 mg/L	97%	85-115%	0.0%	0-20%	
	Zinc	0.097 mg/L		0.1 mg/L	97%	85-115%	3.0%	0-20%	
MS	Arsenic	0.507 mg/L	0.003 mg/L	0.5 mg/L	101%	80-120%			
	Barium	0.555 mg/L	0.061 mg/L	0.5 mg/L	99%	80-120%			
	Cadmium	0.4817 mg/L	ND	0.5 mg/L	96%	80-120%			
	Chromium	0.491 mg/L	0.020 mg/L	0.5 mg/L	94%	80-120%			
	Copper	0.4847 mg/L	0.0118 mg/L	0.5 mg/L	95%	80-120%			
	Iron	49.6 mg/L	ND	50.5 mg/L	98%	80-120%			
	Lead	0.480 mg/L	0.008 mg/L	0.5 mg/L	94%	80-120%			
	Manganese	0.467 mg/L	ND	0.5 mg/L	93%	80-120%			
	Nickel	0.479 mg/L	ND	0.5 mg/L	96%	80-120%			
	Selenium	0.4975 mg/L	0.0150 mg/L	0.5 mg/L	97%	80-120%			
	Silver	0.472 mg/L	ND	0.5 mg/L	94%	80-120%			
	Zinc	0.485 mg/L	ND	0.5 mg/L	97%	80-120%			
MSD	Arsenic	0.489 mg/L	0.003 mg/L	0.5 mg/L	97%	80-120%	3.6%	0-20%	
	Barium	0.620 mg/L	0.061 mg/L	0.5 mg/L	112%	80-120%	11.1%	0-20%	
	Cadmium	0.4741 mg/L	ND	0.5 mg/L	95%	80-120%	1.6%	0-20%	
	Chromium	0.495 mg/L	0.020 mg/L	0.5 mg/L	95%	80-120%	0.8%	0-20%	
	Copper	0.4739 mg/L	0.0118 mg/L	0.5 mg/L	92%	80-120%	2.3%	0-20%	
	Iron	49.8 mg/L	ND	50.5 mg/L	99%	80-120%	0.4%	0-20%	
	Lead	0.473 mg/L	0.008 mg/L	0.5 mg/L	93%	80-120%	1.5%	0-20%	
	Manganese	0.471 mg/L	ND	0.5 mg/L	94%	80-120%	0.9%	0-20%	
	Nickel	0.485 mg/L	ND	0.5 mg/L	97%	80-120%	1.2%	0-20%	
	Selenium	0.5266 mg/L	0.0150 mg/L	0.5 mg/L	102%	80-120%	5.7%	0-20%	
	Silver	0.470 mg/L	ND	0.5 mg/L	94%	80-120%	0.4%	0-20%	
	Zinc	0.473 mg/L	ND	0.5 mg/L	95%	80-120%	2.5%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples Quarterly**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Receipt temp: **1.5 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD082818-01**
Oxidor Sample ID: **18080631-001**
Collected: **08/28/18 08:00**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD082818-02**
Oxidor Sample ID: **18080631-002**
Collected: **08/28/18 08:00**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SO082818-01**
Oxidor Sample ID: **18080631-003**
Collected: **08/28/18 08:20**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **SO082818-02**
Oxidor Sample ID: **18080631-004**
Collected: **08/28/18 08:20**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **LO082818-01**
Oxidor Sample ID: **18080631-005**
Collected: **08/28/18 08:35**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Exide Technologies
Billy King

Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **LO082818-02**
Oxidor Sample ID: **18080631-006**
Collected: **08/28/18 08:35**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

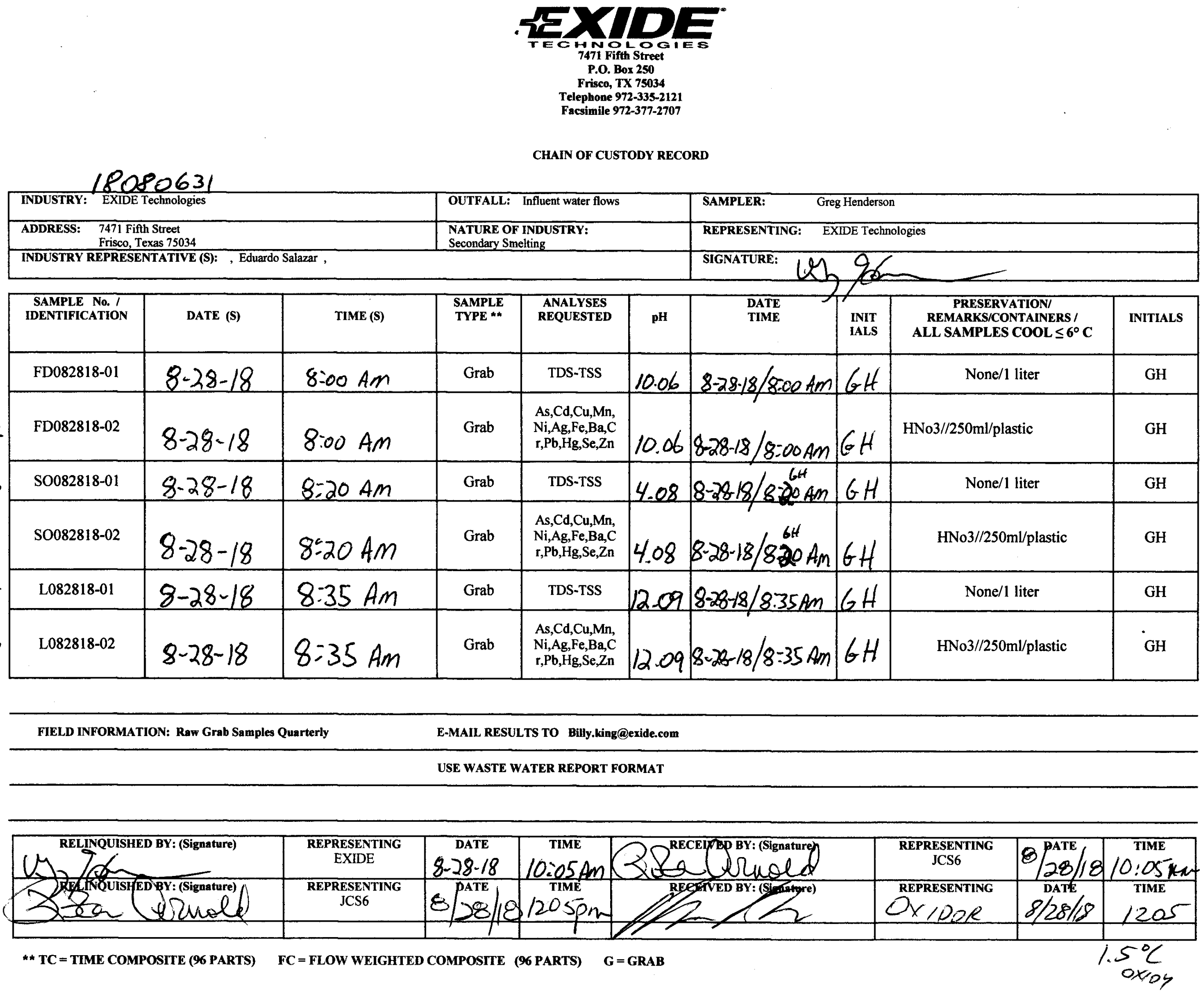
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**



EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

18080631

INDUSTRY: EXIDE Technologies	**OUTFALL:** Influent water flows	**SAMPLER:** Greg Henderson
ADDRESS: 7471 Fifth Street Frisco, Texas 75034	**NATURE OF INDUSTRY:** Secondary Smelting	**REPRESENTING:** EXIDE Technologies
INDUSTRY REPRESENTATIVE (S): , Eduardo Salazar ,		**SIGNATURE:**

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INIT IALS	PRESERVATION/ REMARKS/CONTAINERS / ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD082818-01	8-28-18	8:00 Am	Grab	TDS-TSS	10.06	8-28-18/8:00 Am	GH	None/1 liter	GH
002	FD082818-02	8-28-18	8:00 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	10.06	8-28-18/8:00 Am	GH	HNo3//250ml/plastic	GH
003	SO082818-01	8-28-18	8:20 Am	Grab	TDS-TSS	4.08	8-28-18/8:20 Am GH	GH	None/1 liter	GH
004	SO082818-02	8-28-18	8:20 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	4.08	8-28-18/8:20 Am GH	GH	HNo3//250ml/plastic	GH
005	L082818-01	8-28-18	8:35 Am	Grab	TDS-TSS	12.09	8-28-18/8:35 Am	GH	None/1 liter	GH
006	L082818-02	8-28-18	8:35 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,C r,Pb,Hg,Se,Zn	12.09	8-28-18/8:35 Am	GH	HNo3//250ml/plastic	GH

FIELD INFORMATION: Raw Grab Samples Quarterly **E-MAIL RESULTS TO** Billy.king@exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY: (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY: (Signature)	REPRESENTING	DATE	TIME
	EXIDE	8-28-18	10:05 Am	B. Arnold	JCS6	8/28/18	10:05 Am
B. Arnold	JCS6	8/28/18	1205 pm		OXIDOR	8/28/18	1205

1.5°C
OXI04

** TC = TIME COMPOSITE (96 PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB

GOLDER

February 28, 2019 Project No. 130208605

Brad Weaver
Exide Technologies
7471 Fifth Street
Frisco, Texas 75034

RE: 2018 FOURTH QUARTER FRENCH DRAIN OPERATIONAL REPORT, EXIDE TECHNOLOGIES, INC., 7471 FIFTH STREET, FRISCO, TEXAS

Dear Mr. Weaver:

Golder Associates Inc. (Golder) has prepared this quarterly operational report for the French Drain System (FDS) at the Exide Technologies, Inc. (Exide) facility located at 7471 Fifth Street in Frisco, Texas (Site). This report has been prepared in response to the Texas Commission on Environmental Quality (TCEQ) comments to the 2013 Affected Property Assessment Report (APAR) dated October 8th, 2013 which requested additional information regarding the performance of the French Drain and the TCEQ comments to the 2014 APAR dated May 5, 2015 which requested quarterly reports on the operation of the French Drain System.

This report includes general FDS background information and summarizes operation of the FDS system during the fourth quarter 2018. Specifically, the quarterly report includes a discussion of the performance of the system, gallons of water intercepted, concentrations of contaminants in the water, the presence and/or absence of leakage along the flood wall into Stewart Creek, the presence or absence of white crystalline substance and sample results (if applicable), and a determination as to whether ongoing discharges to Stewart Creek are continuing to occur. As stated in previous reports, survey data for the French Drain and Stewart Creek and specific notes on which days the French Drain was pumped, as requested by TCEQ, are included in this report.

1.0 FRENCH DRAIN SYSTEM HISTORY

According to historical information contained in the French Drain Construction Report (W&M Environmental Group, Inc. [W&M], 2013), the concrete retaining wall along the southern edge of the operating area was constructed in the late 1980s to keep Stewart Creek floodwaters from entering the operating portion of the facility and to retain storm water from the operating portion of the facility for subsequent collection and treatment at the onsite water treatment plants. After construction of the retaining wall, areas of seepage along the Stewart Creek side of the retaining wall were previously observed by Exide and its consultants; primarily between the Battery Receiving Building and the Slag Treatment Building. In response, Exide sealed numerous cracks in the retaining wall. In 2011, W&M designed the FDS and associated repairs to drain any water that collected below the pavement on the north side of the FDS and eliminate seepage through the flood wall. Water from the FDS is pumped to storage tanks in the wastewater treatment area for off-Site disposal. Additional FDS information, including system specifications, is included in the French Drain Monitoring Plan (FDMP) that was previously

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provided to TCEQ.

2.0 DESCRIPTION OF MONITORING AND INSPECTION ACTIVITIES

Activities completed during the fourth quarter 2018 included the following:

- Daily (week day) Inspections and Maintenance – Inspection of the flowmeter and recording flow rate and totalizer reading.
- Weekly Inspections and Maintenance – Inspection and maintenance of the FDS collection sump.
- Quarterly Inspections and Maintenance –
    - Inspect the FDS for sedimentation.
    - Inspect Flood Wall waterstop and joint fillers.
    - Inspect Flood Wall for signs of seepage through the wall, cracks or other signs of damage.

Monitoring and inspection activities completed for the FDS in accordance with the FDMP during the fourth quarter 2018 were completed by both Exide Site personnel as well as Golder staff. Exide Site personnel conducted daily and weekly activities and Golder personnel conducted quarterly inspections.

No deviations from the FDMP occurred during the fourth quarter 2018. A more detailed description of the results of data collection activities and inspections is included in section 3.0 below.

3.0 OBSERVATIONS AND RESULTS

3.1 Gallons of Water Intercepted

The flow rate and totalizer reading for the FDS were generally recorded each weekday. Table 1 summarizes the recorded flows of the FDS and the off-Site daily precipitation based on data recorded at a local weather station located in Frisco, Texas (data obtained from https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20190201/mcustom).

3.2 Groundwater and Perched Water Level Observations

Water levels for MW-26, MW-29, MW-31, MW-32, MW-33, MW-34, MW-35, and MW-46 were measured and recorded during the fourth quarter 2018. Table 2 summarizes the groundwater depths and elevations from this sampling event as well as previous data and includes the elevations of the banks and bottom of Stewart Creek at transects located near the upstream, midpoint, and downstream end of the FDS. Monitoring well locations and Stewart Creek elevations are shown on Figure 1. In general, water levels did not vary significantly from previous readings in third quarter 2018 with some wells having a slight decrease in water level while others had a slight increase.

3.3 Floodwall Seepage

At the time of the wall inspection on December 4, 2018, minor cracks were observed in isolated areas along the wall. Exide was notified and repairs were made as needed. No seepage from the floodwall was observed. The floodwall waterstops and joint fillers were generally in good condition and no major cracks were observed.

3.4 White Crystalline Material Observations

White crystalline material was not observed on the flood wall during the Golder inspection conducted on December 4, 2018. As such, no samples of white crystalline material were collected or analyzed.

3.5 Laboratory Analytical Results

Water samples were collected by Exide personnel from the FDS during the fourth quarter 2018. Sampling of the French Drain was conducted on December 1, 2018. All analytical results from these samples are included in Table 3 and Attachment A.

4.0 SUMMARY OF SYSTEM PERFORMANCE

Based on the results of the inspection and monitoring activities for the fourth quarter 2018 described above, the FDS appears to be operating as designed. Water was removed from the FDS as designed other than during periods of heavy rainfall or as otherwise noted on Table 1.

5.0 CLOSURE

Golder appreciates the opportunity to assist Exide with this project. Please contact us if you have any questions or comments concerning this quarterly operational report.

Sincerely,

GOLDER ASSOCIATES INC.

Emily White

Emily P. White
Project Geological Engineer

Anne Faeth-Boyd

Anne M. Faeth-Boyd, P.G.
Associate and Senior Engineer

Frederick M. Booth, P.G. (Louisiana)
Principal and Program Leader

EPW/AMF/FMB

Attachments: Table 1: French Drain Daily Flow Volumes

Table 2: Perched and Groundwater Monitoring Well Water Elevations

Table 3: French Drain Water Analytical Data

Figure 1: Stewart Creek Transects

Attachment A: French Drain Water Laboratory Analytical Results

Table 1
French Drain Daily Flow Volumes

Oct-18			Nov-18			Dec-18		
Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)	Total Flow (gal)		Total Precip (in)
62,360		12.20	15,840		0.70	27,580		5.06
Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)	Date	Daily Flow (gal)	Daily Precip (in)
Monday, October 01, 2018	NR[1]	0.00	Thursday, November 01, 2018	3,130	0.00	Saturday, December 01, 2018	70	0.00
Tuesday, October 02, 2018	6,630	0.00	Friday, November 02, 2018	1,550	0.00	Sunday, December 02, 2018	NR	0.00
Wednesday, October 03, 2018	10,990	0.00	Saturday, November 03, 2018	1,590	0.34	Monday, December 03, 2018	NR[3]	0.00
Thursday, October 04, 2018	2,400	0.00	Sunday, November 04, 2018	NR	0.01	Tuesday, December 04, 2018	190	0.00
Friday, October 05, 2018	780	0.00	Monday, November 05, 2018	NR[3]	0.00	Wednesday, December 05, 2018	90	0.00
Saturday, October 06, 2018	330	0.00	Tuesday, November 06, 2018	1,780	0.00	Thursday, December 06, 2018	70	0.09
Sunday, October 07, 2018	NR	0.04	Wednesday, November 07, 2018	700	0.11	Friday, December 07, 2018	160	0.61
Monday, October 08, 2018	870	1.32	Thursday, November 08, 2018	420	0.00	Saturday, December 08, 2018	6,150	0.63
Tuesday, October 09, 2018	NR[1]	1.53	Friday, November 09, 2018	380	0.00	Sunday, December 09, 2018	NR	0.00
Wednesday, October 10, 2018	9,710	0.01	Saturday, November 10, 2018	440	0.00	Monday, December 10, 2018	5,810	0.00
Thursday, October 11, 2018	4,750	0.00	Sunday, November 11, 2018	NR	0.05	Tuesday, December 11, 2018	1,240	0.00
Friday, October 12, 2018	3,290	0.28	Monday, November 12, 2018	1,730	0.19	Wednesday, December 12, 2018	590	0.00
Saturday, October 13, 2018	NR[1]	1.73	Tuesday, November 13, 2018	NR[4]	0.00	Thursday, December 13, 2018	1,440	0.75
Sunday, October 14, 2018	NR	0.12	Wednesday, November 14, 2018	NR[4]	0.00	Friday, December 14, 2018	3,550	0.08
Monday, October 15, 2018	NR[1]	1.06	Thursday, November 15, 2018	1,670	0.00	Saturday, December 15, 2018	NR	0.00
Tuesday, October 16, 2018	NR[1]	0.97	Friday, November 16, 2018	440	0.00	Sunday, December 16, 2018	NR	0.00
Wednesday, October 17, 2018	NR[1]	0.39	Saturday, November 17, 2018	180	0.00	Monday, December 17, 2018	4,860	0.00
Thursday, October 18, 2018	NR[1]	0.01	Sunday, November 18, 2018	NR	0.00	Tuesday, December 18, 2018	880	0.00
Friday, October 19, 2018	NR[1]	1.99	Monday, November 19, 2018	410	0.00	Wednesday, December 19, 2018	1,030	0.12
Saturday, October 20, 2018	NR[1]	0.00	Tuesday, November 20, 2018	NR	0.00	Thursday, December 20, 2018	560	0.00
Sunday, October 21, 2018	NR[1]	0.00	Wednesday, November 21, 2018	NR	0.00	Friday, December 21, 2018	890	0.00
Monday, October 22, 2018	NR[2]	0.00	Thursday, November 22, 2018	NR	0.00	Saturday, December 22, 2018	NR	0.00
Tuesday, October 23, 2018	NR[2]	0.00	Friday, November 23, 2018	NR	0.00	Sunday, December 23, 2018	NR	0.00
Wednesday, October 24, 2018	NR[2]	1.93	Saturday, November 24, 2018	NR	0.00	Monday, December 24, 2018	NR	0.00
Thursday, October 25, 2018	NR[2]	0.03	Sunday, November 25, 2018	NR	0.00	Tuesday, December 25, 2018	NR	0.01
Friday, October 26, 2018	NR	0.01	Monday, November 26, 2018	1,070	0.00	Wednesday, December 26, 2018	NR	2.02
Saturday, October 27, 2018	7,010	0.00	Tuesday, November 27, 2018	140	0.00	Thursday, December 27, 2018	NR	0.23
Sunday, October 28, 2018	NR	0.00	Wednesday, November 28, 2018	60	0.00	Friday, December 28, 2018	NR	0.00
Monday, October 29, 2018	11,450	0.00	Thursday, November 29, 2018	80	0.00	Saturday, December 29, 2018	NR	0.00
Tuesday, October 30, 2018	2,640	0.00	Friday, November 30, 2018	70	0.00	Sunday, December 30, 2018	NR	0.04
Wednesday, October 31, 2018	1,510	0.78	--	--	--	Monday, December 31, 2018	NR	0.48

Notes:
Precipitation data obtained from: https://www.wunderground.com/personal-weather-station/dashboard?ID=KTXDALLA25#history/s20171231/e20190201/mcustom
Daily flow volumes provided by Exide.
NR - Not Recorded.
[1] Did not pump; water over top of french drain because of amount of rainfall at the Site.
[2] Did not pump; no room in storage tank.
[3] Did not pump to accommodate Golder field sampling.
[4] Did not pump due to freezing temperatures.

Prepared by: BCW 01/10/2019
Checked by: EPW 02/19/2019
Reviewed by: AMF 02/21/2019, FMB 02/27/2019

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Stewart Creek Elevations		
Survey Point	**Measurement Date**	**Elevation (ft msl)**
Transect 1		
Top of North Bank	3/7/2016	628.74
Toe of North Bank	3/7/2016	624.79
Creek Centerline	3/7/2016	622.79
Toe of South Bank	3/7/2016	624.27
Top of South Bank	3/7/2016	634.09
Transect 2		
Top of North Bank	3/7/2016	627.97
Toe of North Bank	3/7/2016	623.57
Toe of South Bank	3/7/2016	624.04
Top of South Bank	3/7/2016	630.52
Transect 3		
Top of North Bank	3/7/2016	628.20
Toe of North Bank	3/7/2016	622.70
Toe of South Bank	3/7/2016	622.88
Top of South Bank	3/7/2016	628.18

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-26 (Groundwater)	631.93	5-15	3/11/2013	9.98	621.95
			4/5/2013	9.52	622.41
			4/29/2013	9.21	622.72
			1/21/2014	5.80	626.13
			7/29/2014	5.79	626.14
			9/23/2014	8.9	623.03
			6/12/2015	5.32	626.61
			9/8/2015	5.72	626.21
			12/17/2015	5.32	626.61
			2/29/2016	5.41	626.52
			6/1/2016	5.47	626.46
			9/8/2016	5.51	626.42
			12/2/2016	5.65	626.28
			3/2/2017	5.81	626.12
			5/4/2017	6.21	625.72
			8/28/2017	5.56	626.37
			11/27/2017	5.71	626.22
			2/15/2018	5.75	626.18
			5/9/2018	5.65	626.28
			9/24/2018	NA	NA
			12/4/2018	5.60	626.33

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-29 (Groundwater)	633.51	4.5-14.5	3/11/2013	13.08	620.43
			4/5/2013	6.96	626.55
			4/29/2013	6.56	626.95
			1/21/2014	6.62	626.89
			7/29/2014	6.57	626.94
			9/23/2014	6.04	627.47
			6/12/2015	5.21	628.30
			9/8/2015	6.35	627.16
			12/17/2015	5.67	627.84
			2/29/2016	5.79	627.72
			6/1/2016	5.69	627.82
			9/8/2016	5.67	627.84
			12/2/2016	6.25	627.26
			3/2/2017	6.51	627.00
			5/4/2017	5.80	627.71
			8/28/2017	5.90	627.61
			11/27/2017	6.77	626.74
			2/15/2018	6.77	626.74
			5/9/2018	5.95	627.56
			9/24/2018	NA	NA
			12/4/2018	6.12	627.39
MW-31 (Groundwater)	636.71	8-23	5/13/2013	10.58	626.13
			1/21/2014	10.87	625.84
			7/29/2014	10.81	625.90
			9/23/2014	11.32	625.39
			6/12/2015	9.61	627.10
			9/8/2015	10.53	626.18
			12/17/2015	9.42	627.29
			2/29/2016	9.78	626.93
			6/1/2016	9.82	626.89
			9/8/2016	9.90	626.81
			12/2/2016	10.21	626.50
			3/2/2017	12.23	624.48
			5/4/2017	10.58	626.13
			8/28/2017	9.99	626.72
			11/27/2017	10.82	625.89
			2/15/2018	10.90	625.81
			5/9/2018	10.19	626.52
			9/24/2018	NA	NA
			12/4/2018	10.42	626.29

Table 2

Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-32 (Perched)	630.96	2.5-5	1/21/2014	4.16	626.80
			7/29/2014	4.59	626.37
			9/23/2014	4.59	626.37
			6/12/2015	3.79	627.17
			9/8/2015	R	R
			2/29/2016	3.57	627.39
			6/1/2016	3.62	627.34
			9/8/2016	3.83	627.13
			12/2/2016	3.40	627.56
			3/2/2017	3.26	627.70
			5/4/2017	3.49	627.47
			8/28/2017	3.55	627.41
			11/27/2017	3.54	627.42
			2/15/2018	3.21	627.75
			5/9/2018	3.30	627.66
			9/24/2018	NA	NA
			12/4/2018	2.70	628.26
MW-33 (Perched)	632.59	2.5-5	1/21/2014	1.09	631.50
			7/29/2014	2.14	630.45
			9/23/2014	1.55	631.04
			12/17/2015	1.21	631.38
			2/29/2016	1.07	631.52
			6/1/2016	1.09	631.50
			9/8/2016	1.07	631.52
			12/2/2016	0.95	631.64
			3/2/2017	0.88	631.71
			5/4/2017	0.91	631.68
			8/28/2017	0.86	631.73
			11/27/2017	0.85	631.74
			2/15/2018	0.81	631.78
			5/9/2018	0.80	631.79
			9/24/2018	NA	NA
			12/4/2018	0.95	631.64
MW-34 (Perched)	632.83	2.5-5	1/21/2014	4.31	628.52
			7/29/2014	4.45	628.38
			9/23/2014	4.45	628.38
			6/12/2015	3.42	629.41
			12/17/2015	3.03	629.80
			2/29/2016	1.95	630.88
			6/1/2016	2.04	630.79
			9/8/2016	2.59	630.24
			12/2/2016	2.50	630.33
			3/2/2017	2.75	630.08
			5/4/2017	3.93	628.90
			8/28/2017	2.95	629.88
			11/27/2017	3.62	629.21
			2/15/2018	3.71	629.12
			5/9/2018	3.57	629.26
			9/24/2018	NA	NA
			12/4/2018	3.08	629.75

Table 2
Perched and Groundwater Monitoring Well Water Elevations

Well ID	TOC Elevation (ft msl)	Screen Interval (ft bgs)	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft msl)
MW-35 (Perched)	632.55	2.5-5	1/21/2014	DRY	DRY
			7/29/2014	DRY	DRY
			9/23/2014	DRY	DRY
			6/12/2015	4.97	627.58
			9/8/2015	DRY	DRY
			12/17/2015	4.10	628.45
			2/29/2016	3.86	628.69
			6/1/2016	3.99	628.56
			9/8/2016	4.13	628.42
			12/2/2016	3.85	628.70
			3/2/2017	3.94	628.61
			5/4/2017	4.58	627.97
			8/28/2017	4.16	628.39
			11/27/2017	3.98	628.57
			2/15/2018	3.81	628.74
			5/9/2018	3.92	628.63
			9/24/2018	NA	NA
			12/4/2018	3.74	628.81
MW-46 (Groundwater)	630.98	10-20	1/21/2014	5.21	625.77
			7/29/2014	5.47	625.51
			9/23/2014	5.08	625.90
			6/12/2015	5.50	625.48
			9/8/2015	4.17	626.81
			2/29/2016	5.23	625.75
			6/1/2016	5.30	625.68
			9/8/2016	5.41	625.57
			12/2/2016	4.96	626.02
			3/2/2017	5.00	625.98
			5/4/2017	5.50	625.48
			8/28/2017	4.44	626.54
			11/27/2017	5.41	625.57
			2/15/2018	5.81	625.17
			5/9/2018	4.24	626.74
			9/24/2018	NA	NA
			12/4/2018	4.61	626.37

Notes:
1. bgs - below ground surface.
2. msl - above mean sea level.
3. btoc - below top of casing.
4. R - depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.
5. NA - not accessible due to Site conditions.

Prepared by: BCW 01/11/2019
Checked by: EPW 02/18/2019
Reviewed by: AMF 02/21/2019, FMB 02/27/2019

Table 3
French Drain Water
Analytical Data

	Sample ID FD120118-01		**Sample ID** FD120118-02	
	Laboratory ID 18120002-001		**Laboratory ID** 18120002-002	
	Date Collected 12/1/2018 09:15		**Date Collected** 12/1/2018 09:15	
Metals				
Parameter:	**Result**	**Units**	**Result**	**Units**
Arsenic	NA	mg/L	ND	mg/L
Barium	NA	mg/L	0.068	mg/L
Cadmium	NA	mg/L	ND	mg/L
Chromium	NA	mg/L	0.011	mg/L
Copper	NA	mg/L	0.0047 J-5	mg/L
Iron	NA	mg/L	ND	mg/L
Lead	NA	mg/L	0.006	mg/L
Manganese	NA	mg/L	ND	mg/L
Nickel	NA	mg/L	ND	mg/L
Selenium	NA	mg/L	0.0062	mg/L
Silver	NA	mg/L	ND	mg/L
Zinc	NA	mg/L	ND	mg/L
Mercury	NA	mg/L	ND	mg/L
General Chemistry				
Parameter:	**Result**	**Units**	**Result**	**Units**
Total Suspended Solids	2.0 J-5	mg/L	NA	mg/L
Total Dissolved Solids	1,430	mg/L	NA	mg/L

Notes:
1) NA - Not Analyzed
2) ND - Not Detected
3) mg/L - milligrams per liter
4) J-5 - the associated concentration is an estimated value between the sample detection limit and the adjusted method quantitation limit.

Prepared by: BCW 01/11/2019
Checked by: EPW 02/18/2019
Reviewed by: AMF 02/21/2019, FMB 02/27/2019

LEGEND

⊕ Monitoring Well Location
● Transect Location
🟩 French Drain
🟥 Flood Wall
— Approximate Creek Centerline

0 50 100
Feet

NOTE(S)
1. ELEVATIONS SHOWN ARE MEASURED IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)
1. ELEVATIONS COLLECTED BY BRITTAIN & CRAWFORD, LLC ON MARCH 7, 2016
2. AERIAL IMAGERY - APRIL, 2017

CLIENT
EXIDE TECHNOLOGIES

PROJECT
FRENCH DRAIN QUARTERLY REPORT
FRISCO, TEXAS

TITLE
STEWART CREEK TRANSECTS

CONSULTANT
GOLDER

YYYY-MM-DD	2019-02-20
DESIGNED	JWT
PREPARED	JWT
REVIEWED	EPW
APPROVED	AMF

PROJECT NO.	CONTROL	REV.	FIGURE
130208605	1302086Y003	0	1

PATH: N:\File\2013\13-02086 Exide Frisco\Y - French Drain Quarterly Reports\map documents\1302086Y003.mxd LAST SAVED ON: 2019-02-20 AT: 10:00:35 AM

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

1 in
0

Friday, December 07, 2018

Exide Technologies
Billy King
P.O. Box 250
Frisco, TX 75034
Tel: (972) 335-2121 Fax: (972) 377-2707

Re: Project Name: Raw Grab Samples Quarterly

Oxidor received 6 liquid sample(s). The analysis performed were as follows:

Sample	Sample ID	Matrix	Collected	Analysis
18120002-001	FD120118-01	Liquid	12/1/2018 09:15	Total Dissolved Solids, Total Suspended Solids
18120002-002	FD120118-02	Liquid	12/1/2018 09:15	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18120002-003	SO120118-01	Liquid	12/1/2018 09:45	Total Dissolved Solids, Total Suspended Solids
18120002-004	SO120118-02	Liquid	12/1/2018 09:45	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc
18120002-005	LO120118-01	Liquid	12/1/2018 10:15	Total Dissolved Solids, Total Suspended Solids
18120002-006	LO120118-02	Liquid	12/1/2018 10:15	Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Selenium, Silver, Zinc

To the best of my knowledge, all problems/ anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified via associated flags and/ or in the case narrative. The analyses and data met requirements of NELAC except where noted. All non-NELAC methods are identified accordingly and all estimated uncertainties of test results are within method or EPA specifications.

Respectfully submitted,

Charles Brungardt
President

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD120118-01**
Oxidor Sample ID: 18120002-001
Matrix: **Liquid**
Sample Received: 12/3/2018
Sample Collected: **12/1/2018 09:15**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
General Chemistry								
Total Dissolved Solids	20.0	25	**1430**	mg/L	12/04/18 10:20	SM-2540-C	K.E.L.	
Total Suspended Solids	1.0	5	**2.0**	mg/L	12/03/18 12:45	SM-2540-D	K.E.L.	J-5

Exide Technologies
Billy King

Analytical Report

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID: **FD120118-02**
Oxidor Sample ID: 18120002-002
Matrix: **Liquid**
Sample Received: 12/3/2018
Sample Collected: **12/1/2018 09:15**

Parameter	SDL	MQL	Result	Units	Date Analyzed	Method	Analyst	Flags
Metals								
Digested by method 200.8 on 12/04/18 at 12:10								
Arsenic	0.003	0.005	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Barium	0.003	0.005	**0.068**	mg/L	12/05/18 11:33	200.8	S.M.	
Cadmium	0.0005	0.001	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Chromium	0.003	0.005	**0.011**	mg/L	12/05/18 11:33	200.8	S.M.	
Copper	0.0025	0.005	**0.0047**	mg/L	12/05/18 11:33	200.8	S.M.	J-5
Iron	0.25	0.5	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Lead	0.003	0.005	**0.006**	mg/L	12/05/18 11:33	200.8	S.M.	
Manganese	0.001	0.002	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Nickel	0.003	0.005	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Selenium	0.0025	0.005	**0.0062**	mg/L	12/05/18 11:33	200.8	S.M.	
Silver	0.001	0.001	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Zinc	0.003	0.005	ND	mg/L	12/05/18 11:33	200.8	S.M.	
Digested by method 245.1 on 12/04/18 at 09:18								
Mercury	0.0001	0.0002	ND	mg/L	12/04/18 14:30	245.1	L.Z.	

Exide Technologies
Billy King

Sample Cross Reference

Project Name: **Raw Grab Samples Quarterly**

Customer ID:	Lab ID:	Test	Method	QCBatchID:
FD120118-01	18120002-001	Total Dissolved Solids	SM-2540-C	TDS__13125_L
		Total Suspended Solids	SM-2540-D	TSS__05639_L
FD120118-02	18120002-002	Mercury	245.1	MERC_00542_L
		Arsenic	200.8	META_17073_L
		Selenium	200.8	META_17073_L
		Silver	200.8	META_17073_L
		Zinc	200.8	META_17073_L
		Manganese	200.8	META_17073_L
		Lead	200.8	META_17073_L
		Iron	200.8	META_17073_L
		Copper	200.8	META_17073_L
		Chromium	200.8	META_17073_L
		Nickel	200.8	META_17073_L
		Barium	200.8	META_17073_L
		Cadmium	200.8	META_17073_L
SO120118-01	18120002-003	Total Dissolved Solids	SM-2540-C	TDS__13125_L
		Total Suspended Solids	SM-2540-D	TSS__05639_L
SO120118-02	18120002-004	Mercury	245.1	MERC_00542_L
		Copper	200.8	META_17073_L
		Silver	200.8	META_17073_L
		Selenium	200.8	META_17073_L
		Nickel	200.8	META_17073_L
		Manganese	200.8	META_17073_L
		Iron	200.8	META_17073_L
		Chromium	200.8	META_17073_L
		Zinc	200.8	META_17073_L
		Cadmium	200.8	META_17073_L
		Barium	200.8	META_17073_L
		Arsenic	200.8	META_17073_L
		Lead	200.8	META_17073_L
LO120118-01	18120002-005	Total Dissolved Solids	SM-2540-C	TDS__13125_L
		Total Suspended Solids	SM-2540-D	TSS__05639_L
LO120118-02	18120002-006	Mercury	245.1	MERC_00542_L
		Lead	200.8	META_17073_L
		Arsenic	200.8	META_17073_L
		Barium	200.8	META_17073_L
		Cadmium	200.8	META_17073_L
		Chromium	200.8	META_17073_L
		Iron	200.8	META_17073_L
		Manganese	200.8	META_17073_L
		Nickel	200.8	META_17073_L
		Selenium	200.8	META_17073_L
		Silver	200.8	META_17073_L
		Zinc	200.8	META_17073_L
		Copper	200.8	META_17073_L

Exide Technologies
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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**TDS__13125_L**								
Blank	Total Dissolved Solids	ND mg/L							
LCS	Total Dissolved Solids	1000 mg/L		1000 mg/L	100%	90-110%			
LCSD	Total Dissolved Solids	1000 mg/L		1000 mg/L	100%	90-110%	0.0%	0-5%	
Replicate	Total Dissolved Solids	585 mg/L	590 mg/L				0.9%	0-5%	
QCBatchID	**TSS__05639_L**								
Blank	Total Suspended Solids	ND mg/L							
LCS	Total Suspended Solids	462 mg/L		500 mg/L	92%	85-115%			
LCSD	Total Suspended Solids	477 mg/L		500 mg/L	95%	85-115%	3.2%	0-15%	
Replicate	Total Suspended Solids	170 mg/L	184 mg/L				7.9%	0-15%	
QCBatchID	**MERC_00542_L**								
Blank	Mercury	ND mg/L							
LCS	Mercury	0.0093 mg/L		0.01 mg/L	93%	85-115%			
LCSD	Mercury	0.0094 mg/L		0.01 mg/L	94%	85-115%	1.4%	0-25%	
MS	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%			
MSD	Mercury	0.0094 mg/L	ND	0.01 mg/L	94%	80-120%	0.2%	0-25%	
QCBatchID	**META_17073_L**								
Blank	Arsenic	ND mg/L							
	Barium	ND mg/L							
	Cadmium	ND mg/L							
	Chromium	ND mg/L							
	Copper	ND mg/L							
	Iron	ND mg/L							
	Lead	ND mg/L							
	Manganese	ND mg/L							
	Nickel	ND mg/L							
	Selenium	ND mg/L							
	Silver	ND mg/L							
	Zinc	ND mg/L							
LCS	Arsenic	0.477 mg/L		0.5 mg/L	95%	85-115%			
	Barium	0.492 mg/L		0.5 mg/L	98%	85-115%			
	Cadmium	0.4762 mg/L		0.5 mg/L	95%	85-115%			
	Chromium	0.488 mg/L		0.5 mg/L	98%	85-115%			
	Copper	0.4810 mg/L		0.5 mg/L	96%	85-115%			
	Iron	49.6 mg/L		50.5 mg/L	98%	85-115%			
	Lead	0.475 mg/L		0.5 mg/L	95%	85-115%			
	Manganese	0.475 mg/L		0.5 mg/L	95%	85-115%			
	Nickel	0.470 mg/L		0.5 mg/L	94%	85-115%			
	Selenium	0.4826 mg/L		0.5 mg/L	97%	85-115%			
	Silver	0.496 mg/L		0.5 mg/L	99%	85-115%			
	Zinc	0.470 mg/L		0.5 mg/L	94%	85-115%			

Exide Technologies
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QC Summary

Project Name: **Raw Grab Samples Quarterly**

QC Type	Parameter	Result	Reference Value	Spike Conc	Rec	Rec Limits	RPD	RPD Limits	Flags
QCBatchID	**META_17073_L**								
LCSD	Arsenic	0.474 mg/L		0.5 mg/L	95%	85-115%	0.6%	0-20%	
	Barium	0.489 mg/L		0.5 mg/L	98%	85-115%	0.6%	0-20%	
	Cadmium	0.4827 mg/L		0.5 mg/L	97%	85-115%	1.4%	0-20%	
	Chromium	0.490 mg/L		0.5 mg/L	98%	85-115%	0.4%	0-20%	
	Copper	0.4848 mg/L		0.5 mg/L	97%	85-115%	0.8%	0-20%	
	Iron	50.0 mg/L		50.5 mg/L	99%	85-115%	0.8%	0-20%	
	Lead	0.459 mg/L		0.5 mg/L	92%	85-115%	3.4%	0-20%	
	Manganese	0.486 mg/L		0.5 mg/L	97%	85-115%	2.3%	0-20%	
	Nickel	0.481 mg/L		0.5 mg/L	96%	85-115%	2.3%	0-20%	
	Selenium	0.4881 mg/L		0.5 mg/L	98%	85-115%	1.1%	0-20%	
	Silver	0.489 mg/L		0.5 mg/L	98%	85-115%	1.4%	0-20%	
	Zinc	0.483 mg/L		0.5 mg/L	97%	85-115%	2.7%	0-20%	
MS	Arsenic	0.486 mg/L	ND	0.5 mg/L	97%	80-120%			
	Barium	0.552 mg/L	0.068 mg/L	0.5 mg/L	97%	80-120%			
	Cadmium	0.4569 mg/L	ND	0.5 mg/L	91%	80-120%			
	Chromium	0.491 mg/L	0.011 mg/L	0.5 mg/L	96%	80-120%			
	Copper	0.4758 mg/L	0.0047 mg/L	0.5 mg/L	94%	80-120%			
	Iron	48.8 mg/L	ND	50.5 mg/L	97%	80-120%			
	Lead	0.472 mg/L	0.006 mg/L	0.5 mg/L	93%	80-120%			
	Manganese	0.469 mg/L	ND	0.5 mg/L	94%	80-120%			
	Nickel	0.467 mg/L	ND	0.5 mg/L	93%	80-120%			
	Selenium	0.4892 mg/L	0.0062 mg/L	0.5 mg/L	97%	80-120%			
	Silver	0.470 mg/L	ND	0.5 mg/L	94%	80-120%			
	Zinc	0.471 mg/L	ND	0.5 mg/L	94%	80-120%			
MSD	Arsenic	0.473 mg/L	ND	0.5 mg/L	95%	80-120%	2.7%	0-20%	
	Barium	0.564 mg/L	0.068 mg/L	0.5 mg/L	99%	80-120%	2.2%	0-20%	
	Cadmium	0.4629 mg/L	ND	0.5 mg/L	93%	80-120%	1.3%	0-20%	
	Chromium	0.508 mg/L	0.011 mg/L	0.5 mg/L	99%	80-120%	3.4%	0-20%	
	Copper	0.4652 mg/L	0.0047 mg/L	0.5 mg/L	92%	80-120%	2.3%	0-20%	
	Iron	50.2 mg/L	ND	50.5 mg/L	99%	80-120%	2.8%	0-20%	
	Lead	0.472 mg/L	0.006 mg/L	0.5 mg/L	93%	80-120%	0.0%	0-20%	
	Manganese	0.478 mg/L	ND	0.5 mg/L	96%	80-120%	1.9%	0-20%	
	Nickel	0.474 mg/L	ND	0.5 mg/L	95%	80-120%	1.5%	0-20%	
	Selenium	0.4778 mg/L	0.0062 mg/L	0.5 mg/L	94%	80-120%	2.4%	0-20%	
	Silver	0.477 mg/L	ND	0.5 mg/L	95%	80-120%	1.5%	0-20%	
	Zinc	0.456 mg/L	ND	0.5 mg/L	91%	80-120%	3.2%	0-20%	

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Case Narrative

Project Name: **Raw Grab Samples Quarterly**

J-5	The associated concentration is an estimated value detected between the SDL and the Adjusted MQL
Dx [Value]	Sample diluted by [Value] amount
ppm	Parts per million = mg/Kg or mg/L
ppb	Parts per billion = ug/Kg or ug/L
MQL	Method quantitation limit
SDL	Sample detection limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilutions)
SQL	Sample quantitation limit (reflects any laboratory adjustments made to the sample during analysis such as dry weight or dilution
ND	Analyte not detected at or above SDL
LCS/LCSD	Laboratory control spike / Laboratory control spike duplicate
MS/MSD	Matrix spike / Matrix spike duplicate
RPD	Relative percent difference
Sub	Analysis performed by subcontract laboratory
*	Refer to QC section and / or Case Narrative

Solid samples submitted to the laboratory for analysis by SW-846 Method 8260 should be collected by SW-846 Method 5035. Those samples in which concentrations are less than or equal to 200 ug/kg should be collected in accordance with SW-846 Method 5035, Section 6.2.1. For samples with higher concentrations (> 200 ug/kg), collect samples by SW-846 Method 5035, Section 6.2.2 or 6.2.3. Sample results may not accurately reflect volatile concentrations if collection is not performed according to the referenced methodologies.

Solid samples submitted to the laboratory for analysis by TNRCC Method 1005 should be collected in accordance to the methodology. Those samples in which concentrations of C6 to C12 are known to be absent, or fall under the Petroleum Storage Tank (PST) rule, may be collected in bulk sample jars in accordance with TNRCC Method 1005, Revision 3 clarifications. For samples with concentrations of C6 to C12, or where knowledge of the site does not exist, collect samples by TNRCC Method 1005, Section 6.1. Sample results may not accurately reflect TPH concentrations if collection is not performed according to the referenced methodologies.

Solid sample results reported on a dry weight basis for all applicable analysis, unless otherwise noted. Dry weight calculations based upon % solids obtained as outlined in EPA method 5035 section 7.5.

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Oxidor Laboratories, LLC certifies to the best of its knowledge that all results contained in this report are consistent with the National Environmental Laboratory Accreditation Program, except where otherwise noted.

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Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Receipt temp: **3.1 °C on Ice**
Receipt method: **Customer Courier**
Custody seal intact: **Yes**
All samples / labels received intact: **Yes**

Customer Sample ID: **FD120118-01**
Oxidor Sample ID: **18120002-001**
Collected: **12/01/18 09:15**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **FD120118-02**
Oxidor Sample ID: **18120002-002**
Collected: **12/01/18 09:15**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **SO120118-01**
Oxidor Sample ID: **18120002-003**
Collected: **12/01/18 09:45**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Customer Sample ID: **SO120118-02**
Oxidor Sample ID: **18120002-004**
Collected: **12/01/18 09:45**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Customer Sample ID: **LO120118-01**
Oxidor Sample ID: **18120002-005**
Collected: **12/01/18 10:15**
Collected By: **Greg Henderson**
Collector Affiliation: **Exide Technologies**
Matrix: **Liquid**

Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
1000 mL Plastic	1	Grab		Temp	-

Exide Technologies
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Sample Preservation Verification

Project Name: **Raw Grab Samples Quarterly**

Customer Sample ID:	**LO120118-02**	Collected By:	**Greg Henderson**
Oxidor Sample ID:	**18120002-006**	Collector Affiliation:	**Exide Technologies**
Collected:	**12/01/18 10:15**	Matrix:	**Liquid**

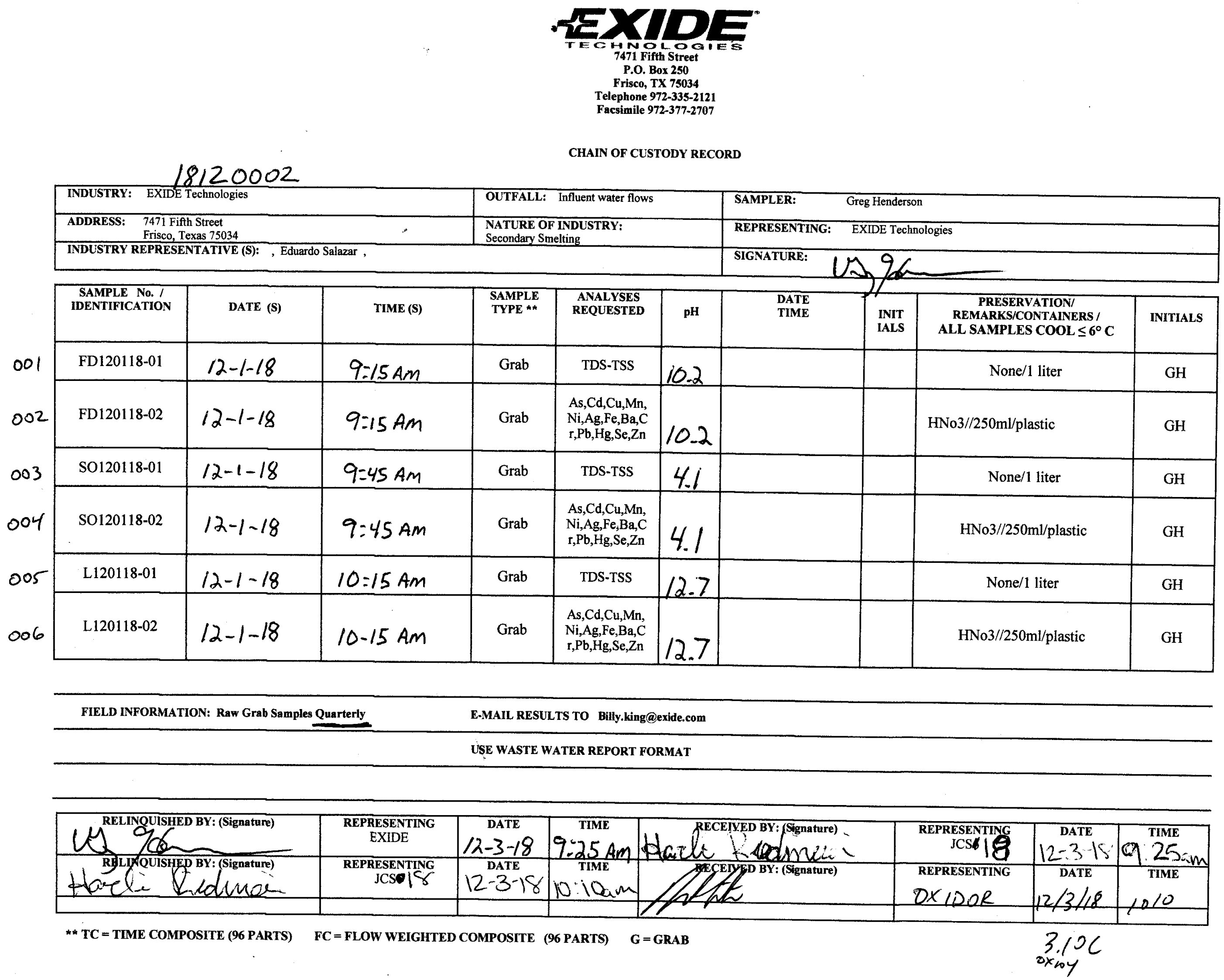
Bottle Type	Count	Collection Method	Parts / Interval	Indicated Preservation	pH
250 mL Plastic	1	Grab		HNO3	<2

Sample conditions at time of receipt at laboratory verified in part or in whole by:

N.F.

Documentation

PROJECT DESCRIPTION: **Raw Grab Samples Quarterly**



EXIDE TECHNOLOGIES
7471 Fifth Street
P.O. Box 250
Frisco, TX 75034
Telephone 972-335-2121
Facsimile 972-377-2707

CHAIN OF CUSTODY RECORD

18120002

INDUSTRY: EXIDE Technologies

ADDRESS: 7471 Fifth Street
Frisco, Texas 75034

INDUSTRY REPRESENTATIVE (S): , Eduardo Salazar ,

OUTFALL: Influent water flows

NATURE OF INDUSTRY: Secondary Smelting

SAMPLER: Greg Henderson

REPRESENTING: EXIDE Technologies

SIGNATURE:

	SAMPLE No. / IDENTIFICATION	DATE (S)	TIME (S)	SAMPLE TYPE **	ANALYSES REQUESTED	pH	DATE TIME	INIT IALS	PRESERVATION/ REMARKS/CONTAINERS / ALL SAMPLES COOL ≤ 6° C	INITIALS
001	FD120118-01	12-1-18	9:15 Am	Grab	TDS-TSS	10.2			None/1 liter	GH
002	FD120118-02	12-1-18	9:15 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,Cr,Pb,Hg,Se,Zn	10.2			HNo3//250ml/plastic	GH
003	SO120118-01	12-1-18	9:45 Am	Grab	TDS-TSS	4.1			None/1 liter	GH
004	SO120118-02	12-1-18	9:45 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,Cr,Pb,Hg,Se,Zn	4.1			HNo3//250ml/plastic	GH
005	L120118-01	12-1-18	10:15 Am	Grab	TDS-TSS	12.7			None/1 liter	GH
006	L120118-02	12-1-18	10-15 Am	Grab	As,Cd,Cu,Mn, Ni,Ag,Fe,Ba,Cr,Pb,Hg,Se,Zn	12.7			HNo3//250ml/plastic	GH

FIELD INFORMATION: Raw Grab Samples Quarterly

E-MAIL RESULTS TO Billy.king@exide.com

USE WASTE WATER REPORT FORMAT

RELINQUISHED BY: (Signature)	REPRESENTING	DATE	TIME	RECEIVED BY: (Signature)	REPRESENTING	DATE	TIME
	EXIDE	12-3-18	9:25 Am	Harli Radman	JCS18	12-3-18	9:25am
Harli Radman	JCS18	12-3-18	10:10am		OXIDOR	12/3/18	1010

** TC = TIME COMPOSITE (96 PARTS) FC = FLOW WEIGHTED COMPOSITE (96 PARTS) G = GRAB

3.1°C
0x104