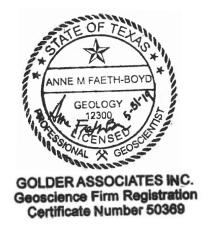


#### **REPORT**

# **GEOLOGY REPORT**

Exide Technologies Frisco Recycling Center



# RCRA Permit Renewal Application

Submitted to:

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May 2019

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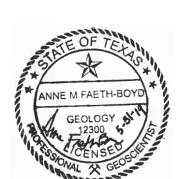
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### INTRODUCTION

This Geology Report was prepared by Golder Associates (Golder) on behalf of Exide Technologies (Exide) as a part of the Resource Conservation and Recovery Act (RCRA) Part B permit renewal and amendment application supplemental filing submitted to the Texas Commission on Environmental Quality (TCEQ) in May 2019 (referred to throughout as the Part B RCRA Permit Renewal Application).

The Exide Technologies Former Operating Plant (FOP) is a former oxide manufacturing, battery recycling and secondary lead smelting facility located at 7471 Old Fifth Street in Frisco, Collin County, Texas. The location of the FOP is shown on Figure VI.A-1. The Part B RCRA Permit Renewal Application and this Geology Report cover the existing RCRA-permitted area of the former operating plant, which includes the recycling center's former operational areas, two closed pre-RCRA landfills (the North Disposal Area and the South Disposal Area), one inactive class 2 landfill (the Slag Landfill), other ancillary facilities, and additionally now covers the following:

- a) The active Class 2 Landfill Corrective Action Management Unit (listed on the Notice of Registration as the "Landfill, North Property, 1996," and referred to herein as the North CAMU) as addressed in Agreed Order 2013-2207-IHW-E and
- b) The Remediation Consolidation Area (RCA), a proposed CAMU which will contain consolidated wastes.

The North CAMU and the RCA are the only active RCRA-permitted units at the Frisco Recycling Center. For purposes of this application, the requested RCRA-permitted area is referred to as the "FOP" or "Site."

### A. GEOLOGY AND TOPOGRAPHY

# A.1 Active Geological Processes

The following subsections describe the active geological processes in the vicinity of and at the FOP.

#### A.1.a Identification of Faults

Based on the literature review described below, there are no faults (active or otherwise) in the area of the FOP.

#### A.1.a.1 Geologic Literature Review

The FOP is situated along the Gulf Basin margin which acts as a divider of the East Texas Basin, which is comprised of the Austin Chalk or the top of Edwards Group Cretaceous formations, and the top of the Ellenburger Paleozoic formation of the Fort Worth Basin.

The following three structural interpretations of the vicinity of the Site were reviewed:

- The 1991 Regional Geology Map from the Geologic Atlas of Texas (Figure VI.A-2)
- The 1997 Tectonic Map of Texas by the University of Texas at Austin BEG (Figure VI.A-3)



#### The 1982 report, "Fault Tectonics of the East Texas Basin," by M.P.A. Jackson

Based on these studies, there is no seismic activity in the vicinity and, as Jackson notes, Quaternary terraces across basin faulting have not been offset, which indicates that faulting ended during the Tertiary.

Additionally, metadata downloaded online from the United States Geological Survey (USGS) Texas Geologic Map indicates no active fault lines are identified in the general vicinity of the FOP. The USGS metadata indicates the closest fault lines to the Exide FOP run north-south near Forney, Texas, approximately 30 miles to the southeast of the Site. According to the 2008 and 2014 USGS Earthquake Hazards Program National Seismic Hazard Map studies, the closest Quaternary fault to the Site is the Meers fault located approximately 140 miles north in Oklahoma.

#### A.1.a.2 Faulting, Fracturing, and Lineations

Based on the USGS documentation described above, the Site is not considered a high hazard for seismic activity. Field surveillance of the Site for surface features such as lineations and potential surface faults has not identified any indicators of seismic activity. Additionally, the results of the historical investigations at the FOP and reviews of aerial photos, topographic maps, and seismic and subsurface structural maps did not identify any indicators of seismic activity.

#### A.1.a.3 Geologic Maps and Cross-Sections

Geologic maps and cross-sections of the area are summarized below. A topographic map of the area is included as Figure VI.A-6.

#### A.1.a.4 Structural Cross-Sections

A regional geologic cross-section is included as Figure VI.A-7. Cross-sections of the Site's subsurface are included as Figures VI.A-8 through VI.A-17. Cross-sections E-E' (Figure VI.A-13), F-F' (Figure VI.A-14), and I-I' (Figure VI.A-17) cover the area around the North CAMU, and cross-sections B-B' (Figure VI.A-10), C-C' (Figure VI.A-11), F-F' (Figure VI.A-14) intersect the RCA, fence diagram J-J' (Figure VI.A-18) covers adjacent to the Flood Wall and along Stewart Creek, and fence diagram K-K' (Figure VI.A-19) covers the area between the RCA, the North Disposal Area, and the North CAMU. Additional cross sections were created for the design of the groundwater response actions for the FOP. These cross sections are included as Appendix 3.7 of Attachment M to the Part B RCRA Permit Renewal Application.

#### A.1.a.5 Structural Subsurface Maps

As shown on Figures VI.A-9 through VI.A-19, the Eagle Ford Shale is generally located 10 to 30 feet below ground surface at the FOP.



#### A.1.a.6 Field Surveillance

Field surveillance of the Site for surface features such as lineations and potential surface faults has not identified any indicators of seismic activity. Additionally, the results of the historical investigations at the FOP and reviews of aerial photos, topographic maps, and seismic and subsurface structural maps did not identify any indicators of seismic activity.

#### A.1.a.7 Additional Information to Define Geology

No additional information aside from that cited above was required to define the geology of the Site.

#### A.1.a.8 Fault Displacement

No faulting exists within 3,000 feet of the North CAMU or RCA.

#### A.1.a.9 Fault Activity

No faulting exists within 3,000 feet of the North CAMU or RCA.

#### A.1.b Land Surface Subsidence

Land surface subsidence is the settlement and downward movement of the ground surface. Subsidence can be naturally occurring or a result of fluid withdrawal.

Natural subsidence is a product of dissolution of the soluble substrate, seismic activity, faulting, and sediment compaction. According to the Closure Plan, which is included with the Part B RCRA Permit Renewal Application as Attachment C, the North CAMU and RCA are not expected to experience settling or subsidence due to the stable physical nature of the materials (e.g., high density slag and compacted soils).

According to the online USGS Texas Water Science Center, the only records of subsidence in Texas are in the Harris-Galveston coastal region and the Fort Bend region of Houston.

Fluid withdrawal can be associated with processes such as groundwater extraction, oil and gas production, and coastal effects. Fluid withdrawal in the vicinity of and at the FOP is unlikely to cause subsidence:

- Removal of groundwater from the monitoring wells at the FOP and surrounding buffer property is for sampling purposes only. The overall volume of water removed during groundwater sampling is very small.
- According to the online Public Geographical Information Systems (GIS) Viewer Map provided by the Railroad Commission of Texas (RRC), one plugged gas well is located approximately four miles to the northwest of the FOP. Oil production is not occurring within the general vicinity of the Site.
- Based on a water well survey, which incorporated the Banks Environmental Data's database review included as Attachment G to the Part A of the RCRA permit renewal and amendment application supplemental filing submitted to the TCEQ in May 2019, only 12 active water wells are located within one mile of the Site. Most



of these wells are used for stock watering, irrigation, or domestic purposes; one well located approximately 2,000 feet to the northeast of the Site is used for public supply. No information on the rate of water extraction from these surrounding wells was found; however, given their uses and locations, it is unlikely that groundwater extraction from these wells would cause subsidence at the FOP.

■ Finally, according to Lon Langley's 1999 report, "Updated Evaluation of Water Resources in Part of North-Central Texas," despite a substantial increase in population growth in the region, a significant reduction of groundwater use was observed between the 1980s and 1999 as surface water became more heavily used in the region.

# A.1.c Erosion Susceptibility

Based on the United States Department of Agriculture (USDA) Natural Resources Conservation Service Online Web Soil Survey, the soils located at the FOP are comprised of primarily silty clay, gravelly clay loam, and clays. A plan view of the soils at the FOP is presented in Figure VI.A-4. Additional detailed information obtained from investigation activities performed at the Site generally supports the information provided by the USDA (see boring logs included in Appendix B).

The Online Web Soil Survey indicated the off-road, off-trail erosion hazard at the FOP as "slight" which indicates that erosion is not likely to occur under normal climatic conditions. The road, trail erosion hazard was listed as "slight" to "moderate," indicating that the roads or trails may require occasional maintenance and only minor erosion control measures are necessary. The majority of the FOP area is listed under surface water management as "somewhat limited" indicating that the soil features are moderately likely to convey surface water across the landscape, which is indicative of a low erosion environment for surface water features.

According to the USDA, in the area of the North CAMU, Austin silty clay is the primary soil; it has approximately two to five percent slopes and is listed as eroded. The soil is well drained, has a low amount of available water in storage, is in the medium runoff class, and, with a saturated hydraulic conductivity (K<sub>sat</sub>) of 0.06 to 0.57 inches per hour (in/hr), has a moderately low to moderately high capacity to transmit water. The secondary soil found around the North CAMU is Houston black clay with 1 to 3 percent slopes. The soil is moderately well drained, contains a high amount of available water in storage, is in the very high runoff class, and has a low to moderately low capacity to transmit water given a K<sub>sat</sub> of up to 0.06 in/hr.

Tinn clay is the primary soil in the vicinity of the RCA. It has 0 to 1 percent slopes, is moderately well drained, has a moderate amount of available water in storage, and is in the high runoff class. It has a very low K<sub>sat</sub> range of up to 0.06 in/hr. The secondary soils found in the vicinity of the RCA are Austin silty clay and Houston black clay, described above.

# A.1.d Major Geologic Formations

Table VI.A.1, attached, summarizes the major geologic formations beneath the facility.



# A.2 Regional Physiography and Topography

# A.2.a Distance and Direction to Nearest Surface Water Body

According to Golder Associates' 2014 Affected Property Assessment Report for the Site (the 2014 APAR, which is included as Attachment H to the Part B RCRA Permit Renewal Application), the Site is located within a shallow valley created by the drainages of two streams that flow in a general east to west direction through the Site. The on-site streams include Stewart Creek, which runs along the south side of the former production area, and an unnamed tributary of Stewart Creek (the North Tributary), which runs north of the North Disposal Area and the Slag Landfill. The confluence of these streams occurs northwest of the Site's former production area. Beyond the western boundary of the Site, Stewart Creek flows to the southwest and eventually into Lake Lewisville, located approximately 4.5 miles to the southwest of the Site. The surface water elevation on Lake Lewisville is approximately 515 feet above mean sea level (AMSL) and has a 0.4% average stream-bed slope.

# A.2.b Slope of Land Surface

According to the University of Texas at Austin BEG Physiographic Map of Texas, dated 1996, the Site lies in the northwestern portion of the Blackland Prairies province. A copy of this map is presented in Figure VI.A-5. The Backland Prairies are defined as low undulating terrains comprised of chalk and marl bedrocks with elevations ranging from 450 to 1,000 AMSL. Chalks and marls weather to deep, black, fertile clay soils, typical of the soils encountered during investigations at the FOP. The Grand Prairie physiographic province lies to the west of the Blackland Prairies province.

The Site is located on the 2016 USGS 7.5 minute, Frisco, TX topographic quadrangle map, as shown on Figure VI.A-6. According to the 2016 topographic map, the topography in the vicinity of the Site is generally flat with small slopes towards the various creeks in the area such as Stewart Creek, Cottonwood Branch, and Panther Creek, which all flow into Lake Lewisville to the west of the Site (not pictured in Figure VI.A-6). At the regional scale, the Site is part of the Black Prairie (or Blacklands Prairie province), which is relatively flat with a gentle slope to the east and a gentle rolling surface (Nordstrom 1982). The soils are listed as poorly drained.

#### A.2.c Direction of Slope

In general, the ground surface at the Site slopes either towards Stewart Creek or the North Tributary.

#### A.2.d Maximum Elevation of Facility

Based on survey data from the Site, the maximum ground surface elevation of the facility is approximately 685 feet AMSL in the southeastern portion of the Site at an outcrop of the Austin Group (the Austin Chalk).



# A.2.e Minimum Elevation of Facility

Based on survey data from the Site, the minimum ground surface elevation of the facility is approximately 610 feet AMSL at Stewart Creek near the western boundary of the Site.

# A.3 Regional Geology

The following information describes the regional geology in the vicinity of and at the FOP.

# A.3.a Geologic Map of the Region

A geologic map of the region from the Geologic Atlas of Texas is included as Figure VI.A-2. A description of the map units presented on Figure VI.A-2 that are encountered at the FOP is included in Section A.4.c. and additional description of the units shown on Figure VI.A-2 is included in Table VI.A.1.

# A.3.b Generalized Stratigraphic Column

During the Paleozoic era, the north-central Texas region consisted of a sedimentary basin comprised of sediments of limestone, sandstone, carbonaceous shales, and other marine sediments (Nordstrom 1982). The sediments continued to be deposited in this basin until the Llano Uplift and Ouachita Fold Belt created faulting in the uplift areas and regional tilting to the west. During Permian time, this basin shifted to the west and only the northwest corner of the north-central region received sediments while the remainder of the area experienced widespread erosion.

There was a withdrawal of the seas in the north-central Texas region during the Triassic and Jurassic periods of the early Mesozoic era. With the withdrawal of the seas during these periods, as well as subsidence in the Gulf Coast, there was a reversal of drainage directions (Nordstrom 1982). At the end of the Jurassic time, Paleozoic rocks had been eroded to a peneplain, on which marine sediments were placed during the Cretaceous period. The Gulf Series (late Cretaceous) invasion of seas, produced a general uplift in the west as the seas withdrew and only covered the eastern segment of the north-central region.

Due to the western uplift and the subsidence of the coastal areas during the Cretaceous period, Tertiary and Quaternary sediments were deposited (Nordstrom 1982). During Tertiary time, the region underwent repeated transgression and regression of the sea resulting in marine and continental deposits in interchanging sequences that were then modified by the erosion of streams within the region. The streams then deposited alluvial sediments during the Quaternary time.

The age range of the stratigraphic units that produce slightly saline to fresh water to wells in the north-central region are Paleozoic to Recent (Nordstrom 1982). Stratigraphic units and their water-bearing properties for the north-central Texas region are presented in Attachment A (Nordstrom 1982). A regional geologic cross section is shown on Figure VI.A-7.



# A.4 Subsurface Soils Investigation Report

The following information contains the results of an investigation of subsurface conditions in the vicinity of and at the FOP.

# A.4.a Field Exploration

The 2014 APAR describes numerous investigations conducted since 1983 to characterize the Site soil, groundwater, surface water, and sediments at the FOP. Additional work was performed in 2015, 2018, and 2019 as described in Attachments I (the 2015 Supplement to the APAR) and M (Response Action Plan).

Multiple soil samples were collected at various depth intervals from borings completed at the Site and were analyzed, as necessary, to evaluate/delineate affected property areas at the Site. All available boring logs are presented in Attachment B.

#### A.4.b Soil Strata Profile

A geologic cross-section and fence diagram location map for cross sections and fence diagrams constructed using soil boring data from the Site is provided as Figure VI.A-8. Geologic cross-sections and fence diagrams A-A' through K-K' (Figures VI.A-9 thorough VI.A-19) display cross sections throughout the FOP (the construction diagrams for the wells included in these cross sections are included in Attachment C).

# A.4.c Investigator's Interpretations

The geology encountered at the Site generally consists of approximately 10 to 30 feet of dry, and moist to wet, clayrich, colluvial soils (Quaternary undivided surficial deposits) overlying the Eagle Ford Shale Formation. Colluvium is a general term used to define soil material and rock debris that accumulates at the base of slopes due to erosional forces such as slides, slumps, sheet-floods, or debris flows. It is typically characterized by heterogeneous and poorly sorted material. As displayed in the cross-sections, the colluvial soils at the Site typically consist of clay or silty clay with minor occurrences of gravelly clay (gravel suspended in a clay matrix), sand, and clayey gravel lenses. In addition, soil classifications at the FOP as listed on the USGS' Web Soil Survey are shown on Figure VI.A-4. There are also areas of fill material and waste as noted on Figures VI.A-9 through VI.A-16.

The Site is situated along the north-south trending contacts between the Cretaceous-aged Austin Group (Austin Chalk), the Cretaceous-aged Eagle Ford Formation (Eagle Ford Shale), and Quaternary-aged undivided surficial deposits, as shown in Figure VI.A-2. Regional dip is to the east and southeast such that outcropping rock formations become relatively younger from west to east, with the exception of Quaternary deposits, which are generally controlled by variations in topography. The following regional geologic units (listed from youngest to oldest) are encountered at the surface or in the shallow subsurface at the Site:

Quaternary Undivided Surficial Deposits:



- Sand, clay, silt, and gravel
- Mostly colluvium and minor alluvium (McGowen et al. 1991)

At the FOP, this unit generally consists of clay or silty clay with minor occurrences of gravelly clay (gravel suspended in a clay matrix), sand, and clayey gravel lenses, especially in the vicinity of current and former creek channels.

#### Austin Chalk:

- Upper and lower parts consist of light gray massive chalk (limestone primarily composed of the calcareous skeletons of micro-organisms) with some calcareous clay interbeds and partings.
- The middle part mainly consists of light gray bedded marl with massive chalk interbeds (McGowen et al. 1991).

#### Eagle Ford Shale:

- Medium to dark gray shale (fine-grained, fissile, sedimentary rock composed of clay-sized and silt-sized particles)
- Commonly selenitic (contains gypsum) and bituminous with thin platy beds of sandstone and sandy limestone in middle and upper parts (McGowen et al. 1991)

The Austin Chalk forms steep hillsides to the north, east, and south of the Site. Within the FOP property boundary, the drainages of Stewart Creek and the North Tributary have eroded the Austin Chalk such that the Quaternary surficial deposits typically lie directly on top of the Eagle Ford Shale. The surface of the Eagle Ford Shale has also been eroded in the vicinity of the Site such that it and the overlying Quaternary surficial deposits generally slope north-south toward Stewart Creek or North Tributary and then toward the west in the downstream direction of these drainages.

# A.4.d Waste Management Area Subsurface Conditions

#### **Subsurface Conditions at the North CAMU**

Soil samples collected from borings in the vicinity of the North CAMU were tested for geotechnical properties as part of the initial notification for construction of an on-site class 2 industrial landfill, which was provided to the Texas Natural Resource Conservation Commission (TNRCC) in August 1995 (1995 Notification).

The geotechnical properties of the subsurface soil materials are summarized in Table VI.A.4-1 and discussed below.

According to the 1995 Notification, the following geotechnical laboratory and field tests were performed per ASTM standards or standard engineering practice:

1. Atterberg limits (ASTM D-4318)



- 2. Sieve analysis (ASTM D-421/D-422)
- 3. Hydraulic conductivity (ASTM D-5084), falling head technique
- 4. Standard Proctor compaction tests (ASTM D-698)
- 5. Unconfined compressive strength (ASTM D-2166)
- 6. CU triaxial tests (ASTM D-4767)
- 7. UU triaxial tests (ASTM D-2850)
- 8. Consolidation tests (ASTM D-2435)
- 9. Field slug test (ASTM D-4044)
- 10. Field pumping test (ASTM D-6034)

Site investigations indicate that the soil strata is made up mostly of two layers of clay (identified as a dark upper, near surface and deeper clay stratums). The upper, near surface clay layer includes organics and appears to have been cultivated in the past. The upper layer typically extends from the ground surface to 5 to 9 feet in depth. The deeper clay layer has layers of clayey gravel typically 2 to 4 feet thick and is separated from the underlying Eagle Ford shale by thin layers of sand in several of the referenced borings. The deeper clay layer extends from depths of 5 to 9 feet to the Eagle Ford Shale located 13.5 to 26 feet below ground surface (bgs). The gravel and sand layers at the North CAMU are considered minor and were therefore not considered individual soil units (i.e., sand and gravel were identified within and as part of the major strata defined during the Site investigation).

Testing of the upper, near surface clay stratum indicated unconfined compressive strengths of 1.8 kip/square foot (kip/ft²) to 9.6 kip/ft² at their *in situ* moisture contents (16% to 36%). CU triaxial compression tests indicated an effective friction angle of internal friction of 6.8° and an effective cohesion of 331 pounds/square foot (lb/ft²). Associated soil parameters for strength tests include a moisture content of 26.3%, a dry unit weight of 94.7 lb/ft³, a degree of saturation of 93.4%, a specific gravity of 2.65, and a void ratio of 0.75. Standard Proctor tests on the upper, near surface clay layer resulted in a maximum dry density of 89.4 lb/ft³ and optimum moisture content of 24.5%. Consolidation testing indicated a modified compression index of 0.07 with an initial void ratio of 0.609, initial moisture content of 21%, and final degree of saturation at 114%.

Testing of the deeper clay stratum indicated unconfined compressive strengths of 3.0 kip/ft² to 4.8 kip/ft² at their *in situ* moisture contents (18 to 32%). CU triaxial compression tests indicated an effective friction angle of internal friction of 22.8° to 27.1° and effective cohesions of 216 lb/ft² to 460 lb/ft². Associated soil parameters for strength tests include moisture contents of 18.9% and 29.4%, dry unit weights of 99.5 lb/ft³ and 88.9 lb/ft³, degrees of saturation of 75.7% and 88.7%, specific gravities of 2.65 & 2.7, and void ratios of 0.66 and 0.89, respectively. Standard Proctor tests on the upper, near surface clay layer resulted in a maximum dry density of 103.6 lb/ft³ and optimum moisture content of 17.5%. Consolidation testing indicated a modified compression index of 0.17 with an initial void ratio of 0.899, initial moisture content of 30.6%, and final degree of saturation at 99.1%.



Testing of the underlying Eagle Ford shale indicated a plasticity index (PI) of 31, a liquid limit (LL) of 55, a moisture content of 16.5%, and an unconfined compressive strength of 11.9 kip/ft².

#### Subsurface Conditions at the RCA

Soil samples collected in July 2018 from borings in the vicinity of the proposed RCA were tested for geotechnical properties for the design of the Flood Wall modification as part of this Part B RCRA Permit Renewal Application.

The geotechnical properties of the subsurface soil materials are summarized in Table VI.A.4-2 and are discussed below.

During the 2018 investigation, the following geotechnical laboratory and field tests were performed per ASTM standards or standard engineering practice:

- 1. Water Content (ASTM D-2216)
- 2. Atterberg limits (ASTM D-4318)
- 3. Sieve analysis (ASTM D-421/D-422)
- 4. Hydraulic conductivity (ASTM D-5084), rising and falling head techniques
- 5. UU triaxial tests (ASTM D-2850)
- 6. Field slug test (ASTM D-4044)

Site investigations indicate that the soil strata is made up mostly of two major layer units of clay (identified as a lighter colored upper silty clay [CL designation] and a deeper higher plasticity clay [CH designation]). The CL upper layer typically extends from the ground surface to 2 to 20 feet below ground surface (bgs). The deeper CH clay layer extends from the silty clay layer of 3 to 16 feet to the Eagle Ford Shale located 10.5 to 25 feet bgs. Gravel and sand layers were encountered in several of the boring locations but were encountered inconsistently and minor in nature and were therefore not considered individual soil units (i.e., sand and gravel were identified within and as part of the major strata defined during the site investigation).

Testing of the upper, near surface CL clay stratum indicated an unconfined compressive strength of 1.2 kip/square foot (kip/ft²) at its *in situ* moisture content (24.5%). Associated soil parameters for strength tests include an average moisture content of the soil layer of 28.5%, an average dry unit weight of 91.1 lb/ft³, and an average void ratio of 0.0.85. Permeability in the upper stratum was measured between 4.47E-07 centimeters per second (cm/s) and 2.94E-08 cm/s.

Testing of the deeper CH clay stratum indicated unconfined compressive strengths of 1.6 kip/ft<sup>2</sup> to 2.6 kip/ft<sup>2</sup> at their *in situ* moisture contents (24 to 36%, respectively). Associated soil parameters for strength tests of the

deeper CH clay included an average moisture content of 28.0%, an average dry unit weight of 93.7 lb/ft<sup>3</sup> and an average void ratio of 0.75. Hydraulic conductivity in the lower stratum was measured at 2.4E-08 cm/s.

As shown on Figure VI.A-4, the USDA classifies the natural soils in the vicinity of the RCA as primarily Tinn clay, followed by Austin silty clay, Houston Black clay, and Heiden clay. Selected geotechnical properties of these soils are included in Table VI.A.4-2.

#### Soil Contamination at the Site

Extensive investigations regarding soil impacts from Site operations have been conducted at the Site. A detailed discussion of the investigations and extent of soil affected properties is provided in the 2014 APAR (Attachment H), the 2015 Supplement to the APAR (Attachment I), and the Parkwood Boulevard Parcel Investigation Report (Attachment M, Appendix 3.4). Soil affected properties are outlined in the Response Action Plan (Attachment M).

#### A.4.e Surficial Soils at the Site

This section is not applicable because no land treatment units are proposed as part of the Part B RCRA Permit Renewal Application.

# B. FACILITY GROUNDWATER

# **B.1** Regional Aquifers

The following information describes the regional aquifers in the vicinity of and at the FOP.

#### **B.1.a** Names and Association

Cretaceous age formations make up the most important of the water-bearing formations in the north-central Texas region. The water-bearing formations in the region include the Gulf and the Comanche series. The Gulf Series is further divided into the Navarro, Taylor, Austin, Eagle Ford, and Woodbine series groups. The Comanche Series is further divided into Washita, Fredricksburg, and Trinity. The Trinity consists of Paluxy, Glen Rose, Twin Mountains, and Antlers Formations (Nordstrom 1982).

The Woodbine Formation, which lies directly below the Eagle Ford Shale, is considered by the Texas Water Development Board (TWDB) to be a minor aquifer of Texas. The Paluxy and Twin Mountains formations lie at deeper depths and comprise the upper and lower portions, respectively, of the Trinity Aquifer, which is considered by the TWDB to be a major aquifer of Texas (George et al. 2011).

## **B.1.b** Constituent Materials

The Eagle Ford and Taylor groups are chiefly limestone, clay, shale, and marl. The only important aquifer of the Gulf Series is reportedly the Woodbine Group and is made up of sandstone, sand, and clay (Nordstrom 1982). The Austin and Navarro are comprised of mainly limestone, chalk, marl, clay, and sand. The Washita and Fredricksburg



Groups consist of clay, shale, limestone, and marl. The Paluxy is comprised of shale and sand and the Glen Rose is largely limestone. The Twin Mountains aquifer is generally made up of conglomerate, shale and sand.

# **B.1.c Water-bearing and Transmitting Properties**

The TWBD does not consider the Austin Chalk, the Eagle Ford Shale, or the Quaternary undivided surficial deposits in the vicinity of the Site to be major or minor water-producing formations of Texas (George et al. 2011). The Eagle Ford and Taylor groups have very low groundwater yields. With the exception of the Nacatoch and Blossom Sands, which yield a moderate supply of water, the Austin and Navarro groups generally produce small amounts of localized water. The Woodbine Group produces small to large yields of water (Nordstrom 1982).

The Washita and Fredricksburg Groups have very low groundwater yields. The main water-bearing group of the Comanche Series is the Trinity. The Paluxy can produce small to moderate amounts of water and the Glen Rose produces small amounts of localized water. The Twin Mountains aquifer is the principal water-bearing Cretaceous Age formation, yielding great amounts of water locally. Stratigraphic units and their water bearing properties for the north-central Texas region are described in and are presented in Attachment A (Nordstrom 1982).

Nordstrom (1982) performed pumping tests in all of the counties in the area of study (north-central region). From this research, pumping tests from five different wells were compiled. For wells within the Woodbine Group aquifer, yields within Collin County were reported at 150 gallons per minute (gal/min) with a coefficient of transmissivity of 1,885 (gal/day)/foot. For the Twin Mountains Formation wells within Collin County, yields averaged 1,315 gal/min and had an average coefficient of transmissivity of approximately 25,204 (gal/day)/foot. The Paluxy Formation well within Collin County had a reported yield of 235 gal/min and a coefficient of transmissivity of 1,263 (gal/day)/foot.

#### **B.1.d Aquifer Type**

Gulf and Camanche series aquifers are thought to have groundwater present under both artesian and water table conditions. Based on a regional cross-section (Nordstrom 1982), shown on Figure VI.A-7, the approximate depths of these formations in the vicinity of the Site are as follows:

- Eagle Ford Shale: near surface to 550 feet bgs;
- Woodbine Formation: 550 to 850 feet bgs;
- Washita Group: 850 to 1,325 feet bgs;
- Fredericksburg Group: 1,325 to 1,400 feet bgs;
- Paluxy Formation: 1,400 to 1,650 feet bgs;
- Glen Rose Formation: 1,650 to 2,100 feet bgs; and
- Twin Mountains Formation: 2,100 to 2,650 feet bgs.



## **B.1.e Hydraulic Connectivity**

The Paluxy Formation is separated from the Woodbine Formation by the Washita and Fredericksburg Groups, which are not considered by the TWDB to be major or minor aquifers of Texas (George et al. 2011). The Paluxy and Twin Mountains Formations are separated by the relatively impermeable Glen Rose Formation, which is composed primarily of argillaceous limestone. Gulf and Camanche series aquifers appear to be hydraulically connected. The Blossom Sands are the only reported aquifer presented in Nordstrom (1982) that are probably not hydrologically connected due to the intervening beds being impervious in nature.

# **B.1.f** Regional Potentiometric Surface

Langley (1999) presents potentiometric surface maps for the Woodbine, the Antlers and Twin Mountains Formations, and the Paluxy Formation. Copies of these regional potentiometric surface maps are presented as Attachments C, D and E, respectively.

#### **B.1.g Rate of Groundwater Flow**

Groundwater flow rates at the FOP are discussed below in Section B.2.e.

#### B.1.h Total Dissolved Solids Content

Total dissolved solids (TDS) concentrations for samples collected within the Antlers and Twin Mountains Formations and the Woodbine Aquifer are likely to increase downdip, towards to the eastern part of the north-central region (Langley 1999). TDS in the Antlers and Twin Mountains Formations were reported with an average of approximately 718 milligrams per liter (mg/L) while the Woodbine Aquifer was reported with an average of approximately 877 mg/L.

#### B.1.i Areas of Recharge

The primary source of recharge for the Trinity and Woodbine aquifers is precipitation falling onto the outcrop; however, the recharge is approximated to be less than one inch per year (Nordstrom 1982).

#### B.1.i Present Use of Withdrawn Groundwater

Golder ordered a water well survey from Banks Environmental Data and accessed water well records from the TWDB, TCEQ, and the North Texas Groundwater Conservation District to determine the locations and uses of water wells within in the vicinity of the FOP. According to those records, there are 12 active wells within a one-mile radius of the FOP. The locations of the wells are shown on Attachment C, Figure 1, of the Part A of the RCRA permit renewal and amendment application supplemental filing submitted to the TCEQ in May 2019. Well G0430005, which likely draws water from the Paluxy and Twin Mountains formations, is used for public supply. The other 11 wells are used for either domestic purposes, stock watering or irrigation.



## **B.2** Groundwater Conditions at Each Unit

The following information describes the groundwater conditions at each unit.

#### **B.2.a Water Level Measurements**

During the investigations for the Site Investigation Report (SIR), prepared by PBW and dated July 2012, and APARs, as presented in the 2014 APAR, a total of seven groundwater gauging events (three gauging events during the SIR investigation in 2012, three gauging events during the APAR investigation in 2013, and one gauging event during the APAR investigation in 2014) were conducted using monitoring wells completed in the upper groundwater-bearing unit (GWBU) at the Site. Since the submittal of the APAR in 2014, a Site-wide groundwater gauging event has not been performed; however, additional groundwater information has been recorded during the quarterly North CAMU groundwater monitoring events, French drain inspections, and during the 2018 Deep Groundwater Pre-Design Investigation (2018 DGWPDI). Water levels measured as part of these investigations are presented in Table VI.B.2. The locations of the current monitoring wells at the Site are shown on Figure VI.B-1.

#### B.2.b Historical Maximum and Minimum Static Water Level Measurements

Historical maximum and minimum static water levels are presented in Table VI.B.2.

# B.2.c Upper and Lower Limits of Hydraulically Connected Aquifers

According to the 2014 APAR, the 2018 DGWPDI and the July 2018 Geotechnical Investigation, the uppermost GWBU at the Site is comprised of the clay-rich colluvial soils that lie on top of the Eagle Ford Shale. The Eagle Ford Shale acts as an aquiclude unit at the base of the uppermost GWBU. As indicated in boring logs for surrounding groundwater monitoring wells, the Eagle Ford Formation occurs at depths between approximately 13.5 to 26 feet bgs in the vicinity of the North CAMU and at depths between approximately 10 and 30 feet bgs in the vicinity of the RCA.

Groundwater within the upper GWBU generally occurs under unconfined conditions at depths between approximately 10 and 25 feet bgs; however, more shallow (perched) water has been recorded at depths of less than one foot bgs in the vicinity of the Production Area (most likely attributing to stormwater seeping through cracks in the concrete). Monitoring well locations are shown on Figure VI.B-1. A more detailed discussion of shallow and deeper groundwater within the upper GWBU in the vicinity of the FOP is included in Appendix 3.1 of Attachment H to the 2019 Part B RCRA Permit Renewal Application.

### **B.2.d Site-Specific Potentiometric Surface**

A potentiometric surface map for the upper GWBU across the FOP (collected on January 21, 2014) is included as Figure VI.B-2. A more recent potentiometric surface map for the upper GWBU in the vicinity of the North CAMU is included as Figure VI.B-3. Additional potentiometric surface maps from the 2018 DGWPDI are included as Appendix 3.1 to the Response Action Plan (Attachment M to the 2019 Part B RCRA Permit Renewal Application). The



potentiometric surface at the Site, as depicted on these figures, slopes toward Stewart Creek and/or the North Tributary, suggesting that groundwater flow within the upper GWBU at the Site is strongly controlled by topography and that groundwater discharges to the on-Site creeks.

# **B.2.e Hydraulic Gradient Variation**

#### **FOP**

Pastor, Behling & Wheeler (PBW) conducted slug tests in ten monitoring wells located at the Site to determine variability of hydraulic conductivity (PBW 2013). Wells that were completed in the clay (non-gravel) unit had a hydraulic conductivity geometric mean of 3.3E-06 cm/s. These tests were performed in the clay (non-gravel containing unit), clayey gravel, and gravels, and sands. Results from this investigation are provided in Attachments G and H to this report. The average geometric mean hydraulic conductivity (K) calculated for the three types of materials is as follows: clay at 3.0E-06 cm/s, clayey gravel at 1.7E-03 cm/s, and gravel or sands at 2.0E-2 cm/s. B7N, MW-14, MW-17, MW-19, MW-20, and LMW-9 were analyzed using a slug test in the clay (no gravels) unit. B5N, MW-16S, B9N, LMW-7, and LMW-8 were analyzed using a slug test in the clayey gravel unit. MW-15 and MW-13 were analyzed using a slug test while LMW-17 was analyzed using a pumping test, all within the gravels and sands unit.

Golder conducted slug tests in fourteen monitoring wells located at the Site to determine variability of hydraulic conductivity as part of the 2018 DGWPDI activities. Hydraulic conductivities at the Site ranged from 2E-02 to 2E-06 cm/s with the highest hydraulic conductivities measured in wells with the most coarse-grained soils and the lowest hydraulic conductivities measured in wells with the least amount of coarse-grained material. The wells were grouped into two groups based on a detailed review of boring logs. New wells that were installed targeting the deeper transmissive unit and had higher hydraulic conductivities had a hydraulic conductivity geometric mean of 2E-03 cm/s (DGW-MW-1 through DGW-MW-10). Results from the investigation are presented in the Appendix 3.1 of the Response Action Plan (Attachment M).

In January 2019, Golder installed and developed a new monitoring well to the west of the Slag Landfill (DGW-MW-12) as part of the 2019 Response Action Plan Site Investigation. Both a slug test and a pumping test were completed at DGW-MW-12 in 2019 to further evaluate groundwater movement in the area to the west of the Slag Landfill. Results from the 2019 RAP Site Investigation were consistent with previous Site data, with a hydraulic conductivity value of 3E-04 cm/s, as presented in Appendix 3.5 of the Response Action Plan (Attachment M).

A 1983 groundwater investigation conducted by Dames & Moore (D&M 1983) concluded that the groundwater velocity was toward Stewart Creek and its tributaries at rates of approximately 1.0E-08 to 3.1E-05 cm/sec (or 0.01 to 32 feet/year) in the vicinity of the RCA.



In 2018, Golder Associates conducted the DGWPDI. A five-week groundwater elevation survey was conducted as part of the DGWPDI activities to evaluate groundwater gradient and discharge potential into Stewart Creek. Results from the DGWPDI showed water had a velocity toward Stewart Creek and its tributaries at rate of approximately 5.8E-05 cm/sec (or approximately 12 feet/year) in the vicinity of the RCA.

#### **North CAMU**

As described in Section A.1.c, the range of  $K_{sat}$  values for the primary soil at the North CAMU, Austin silty clay, is 0.06 to 0.57 inches per hour, or approximately  $4x10^{-5}$  to  $4x10^{-4}$  centimeters per second (cm/sec). As shown on Figure VI.B-3, the potentiometric surface drops approximately 36 feet between PMW-19R and LMW-5, yielding a hydraulic gradient of approximately 0.04 feet/feet across the North CAMU. Therefore, according to Darcy's Law, the groundwater flow rate through the unconsolidated sediments in the upper groundwater-bearing unit is estimated to range from 2 to 17 feet/year.

Four slug tests and one pumping test were conducted as part of the 1995 Notification. The results of these tests are provided in Attachment I.

# **B.2.f** Pollutant Migration Pathways

In the event of a failure of the North CAMU liner and cap or the RCA cap and flood wall, contaminants could migrate through the soils to the groundwater table and then discharge into the on-Site portions of the North Tributary or Stewart Creek. As described in the 2014 APAR, contaminants of concern (COCs) at the Site have the potential to move within environmental media (e.g., soil) to some degree. The ability for a compound to be transported within a medium or between media is based on the chemical and physical characteristics of the compound(s), the source medium and the receiving medium. Physical characteristics include parameters such as grain size and moisture content for surface soil particles. Chemical characteristics include parameters such as soil/water distribution coefficients, adsorption potential, and degradation characteristics for potential contaminants. These chemical characteristics are specific to each chemical present, and may be affected by the physical characteristics of the media in which the chemical is present. In surface water, physical and chemical characteristics are both important because transport may occur in solution or in association with suspended sediment. Dissolved-phase transport is the dominant contaminant migration mechanism in groundwater; therefore, chemical characteristics are also often important with respect to that medium.

Leaching and infiltration of COCs from surface and subsurface soils into groundwater may occur with the appropriate physical and/or chemical characteristics. The transportation of COCs in groundwater to surface water and sediments was evaluated and discussed in the 2014 APAR provided as Part B Attachment H and is further discussed in the updated Site conceptual model presented in Appendix 3.1 of the Response Action Plan (Attachment M to the Part B RCRA Permit Renewal Application). Groundwater contaminant plume maps are included as Figures VI.B-4 and VI.B-5. Surface water monitoring data for Stewart Creek have not indicated



exceedances above applicable Protective Concentration Levels (PCLs, see 2014 APAR included as Attachment H to the Permit Renewal Application).

At the request of TCEQ, a groundwater protection element has been added to address the potential for groundwater moving between the footprint of the RCA and Stewart Creek, including the potential migration through deeper debris fill. Detailed investigations, evaluation and discussion is presented in the Response Action Plan provided as Attachment M.

# **B.3** Groundwater Monitoring Plans

The detection monitoring plan for the North CAMU is included as Attachment K to the Part B RCRA Permit Renewal Application, and the groundwater monitoring plan for the FOP a is included as Attachment L to the Part B RCRA Permit Renewal Application. The two detection monitoring programs are described below.

# B.3.a Description of the detection monitoring programs

Groundwater monitoring programs for both the North CAMU and other disposal areas within the FOP, including the RCA, are summarized below in Sections B.3.b through B.3.i. These sections include the following information:

- Justification of monitoring parameters
- Sampling and analysis plan
- Statistical methods
- Monitoring well network
- Sampling parameters
- Monitoring well design
- Description of Site groundwater

The detection monitoring program for the North CAMU is also described in the Revised Class 2 Landfill Groundwater Monitoring Plan, prepared by PBW and dated July 2013, which TCEQ approved in a letter dated April 4, 2014.

# **B.3.b** Justification of waste-specific parameters

#### **North CAMU**

As listed in Table VI.B.3.c-1, the COCs for the North CAMU are arsenic, cadmium, lead, selenium, antimony, barium, chromium, copper, mercury, silver, and zinc. These parameters were chosen for the following reasons:

■ The types of waste historically placed in the North CAMU would be expected to contain metals and/or selenium.



Monitoring between June 2014 and May 2018 has found arsenic, barium, cadmium, chromium, copper, lead, selenium, and zinc at concentrations above detection limits in groundwater near the North CAMU.

According to the Agency for Toxic Substances and Disease Registry's (ATSDR) toxicological profiles, exposure to the constituents listed above can cause both acute and chronic health problems including skin irritation, reproductive impairment, and cancer.

#### <u>FOP</u>

As listed in Table VI.B.3.c-2, the constituents of concern for other disposal areas within the FOP are arsenic, cadmium, lead, antimony, and selenium. These parameters were chosen for the following reasons:

- The types of waste historically generated at the FOP would be expected to contain metals and/or selenium.
- Monitoring conducted in 2018 and early 2019 has found antimony, arsenic, cadmium, and lead above critical PCLs in groundwater near the vicinity of the proposed RCA.
- Soil investigations conducted as part of the 2014 APAR and the supplement to the 2014 APAR and supplemental investigations on Stewart Creek found that these metals were present in soil and sediment at the Site and downstream areas at concentrations exceeding critical PCLs. Soils and sediment containing these compounds will be consolidated at the FOP as a part of the response actions at the Site.
- According to the ATSDR's toxicological profiles, exposure to the constituents listed above can cause both acute and chronic health problems including skin irritation, reproductive impairment and cancer.

# B.3.c Sampling and analysis plan

The following description of the sampling and analysis procedures are adapted from the detection monitoring plans referenced above.

#### **Equipment Assembly and Preparation**

Activities to occur during groundwater sampling are summarized as follows:

- Pre-arrangement of sample analytical requests with analytical testing laboratory
- Assembly and preparation of sampling equipment and supplies
- Groundwater sampling
- Water-level measurements
- Well purging
- Field parameter measurements
- Sample collection
- Filtration (if needed)



- Sample preservation
- Sample labeling
- Completion of sample records
- Completion of chain-of-custody records
- Sample shipment

Prior to the sampling event, equipment to be used will be assembled, properly cleaned and its operating condition verified. In addition, all record-keeping materials will be prepared. Sampling procedures will be conducted in general accordance with EPA SW-846 methods.

#### Equipment Check

This activity includes the verification that all equipment is in proper operating condition. An equipment check will be performed prior to each sampling event. Also, arrangements for repair or replacement of any equipment that is inoperative will be made and such repair or replacement will be completed prior to the sampling event.

#### Equipment Cleaning (Decontamination)

Decontamination of all non-disposable or non-dedicated field measurement, purging, and sampling equipment will be performed for each sampling event before any purging/sampling activities begin, after each well is sampled and at the end of the sampling event. Decontamination procedures are summarized below:

- Wash with low-residue soap and/or detergent solution
- Rinse with distilled water
- Repeat steps (1) and (2) above, as necessary

If non-dedicated, submersible pumps are used for purging and sampling, the outside casing will be washed following the steps outlined above. The interior of the pump will be rinsed by drawing distilled water through the pump. Decontamination water will be collected in a 55-gallon drum pending receipt of groundwater analytical results and properly disposed of at an approved facility.

#### **Groundwater Sampling Procedures**

#### Well Inspection

Prior to each sampling event, each well will be inspected for signs of damage to the well protective casing and well pad. The lock on each well will be checked to make sure it is present and operable. The well numbering on each well will also be checked for legibility.



#### Prevention of Cross-Contamination

Special care will be exercised to prevent contamination of the groundwater and extracted samples during the sampling activities. The primary way in which such contamination can occur is contact with improperly cleaned equipment. To prevent such contamination, all non-dedicated sampling equipment will be thoroughly cleaned before and between uses at different sampling locations in accordance with the decontamination procedures described above. In addition to the use of properly cleaned equipment, a new pair of disposable latex (or similar) gloves will be worn for each well.

#### Groundwater Level Measurements

Groundwater levels will be measured before well purging. Using a pre-cleaned water level meter, the groundwater surface will be measured from the casing datum to the nearest 0.01-foot. Total depths will also be measured in the monitoring wells annually. Water level measurements and total depths will be recorded on a Fluid Level Monitoring Record.

#### Well Purging and Sampling

Prior to each sampling event, the wells will be purged using a peristaltic pump and low-flow technique. Submersible pumps will be used if water levels are too low to allow the use of a peristaltic pump. The objective is to withdraw water in a manner that minimizes stress (drawdown) to the system to the extent practicable. When the pump intake is located within the screened interval, the water pumped will be drawn in directly from the formation with little mixing of casing water or disturbance to the sampling zone.

Purging rates during sample collection will be performed at 0.5 liters per minute (L/min) or less. The field parameters will be used to determine when the well has been adequately purged (stabilized). Stabilization will be confirmed when successive field parameters (specific conductance, pH and temperature) readings are within approximately ± 10%. Turbidity will also be collected during purging. Each field instrument will be calibrated according to the manufacturer's instructions.

A dedicated, decontaminated pump line will be attached to the peristaltic pump. The line inlet will be placed within the saturated portion of the well screen. The pump will then be turned on and measurements started for flow rate and field parameters. The pump line will be changed between wells. The pump rate and the parameter measurements will be recorded on a Groundwater Sampling Record Form. If a well goes dry during purging, sampling will be performed the following day provided the well has sufficiently recharged to allow sample collection. Sample extraction will be accomplished by using the peristaltic pump previously used to purge the well. The sample bottle will be filled directly from the pump line. If the turbidity exceeds 10 Nephelometric Turbidity Units (NTUs), the sample will be filtered through a disposable 10 micron filter prior to collection.



#### **Container and Labels**

The analytical testing laboratory will provide pre-preserved containers and appropriate container lids. The containers will be filled and container lids will be tightly closed. The following information will be legibly and indelibly written on the label:

- Project identification
- Sample identification
- Name or initials of collector
- Date and time of collection
- Analysis requested
- Sample preservative, if applicable
- Filtered or unfiltered, if applicable

#### Sample Shipment

The following packaging and labeling requirements will be employed:

- Preserve samples with ice
- Package sample so that it does not leak from its packaging
- Label package with the following:
  - Sample collector's name, address, and telephone number
  - Laboratory's name, address, and telephone number
  - Date of shipment
- Attach chain-of-custody forms inside sample shipment container.

#### **Chain-of-Custody Control**

After samples have been obtained, chain-of-custody procedures will be followed to establish a written record concerning sample movement between the sampling site and the testing laboratory. Each shipping container will have a chain-of-custody form completed by the sampling personnel packing the samples. The chain-of-custody form for each container will be completed in triplicate and sealed in the container. One copy of this form will be maintained by the project manager and the other copies will be maintained at the laboratory. One of the laboratory copies will become a part of the permanent record for the sample and the other copy returned with the sample analyses report. Samples will be analyzed by a laboratory that is accredited by the National Environmental

Laboratory Accreditation Conference (NELAC) and sample analyses will be performed in accordance with EPA SW-846 methods, as listed in Tables VI.B.3.c-1 and VI.B.3.c-2.

#### **Quality Assurance/Quality Control**

One of the monitoring wells will be sampled in duplicate for each sampling event. The duplicate sample will be analyzed for all parameters for which the original sample is analyzed. Also, equipment blanks may be obtained to evaluate the effectiveness of decontamination procedures. Equipment blanks will be obtained by rinsing the decontaminated equipment with deionized water and collecting the rinsate. The rinsate samples will be analyzed for arsenic, cadmium, lead, and selenium.

#### **B.3.d Statistical methods**

Once the analytical data is received from the laboratory, the laboratory report will be reviewed for any narratives or comments indicating qualified data. Any qualified data will be closely evaluated with the laboratory. Next, the data will be reviewed for results in expected ranges. Anomalous results will be noted for additional review. The laboratory quality control report will also be reviewed to note any qualified data or other indications of anomalous runs. The data will then be deemed validated as appropriate. A Data Usability Summary (DUS) per TRRP 13 guidance will be prepared.

Groundwater analytical data will be compared to TRRP PCLs for each potentially complete exposure pathway. The applicable PCLs are shown on Tables VI.B.3.c-1 and VI.B.3.c-2.

Where an initial sampling indicates a PCL exceedance in a monitoring well, appropriate notification will be provided in writing to the TCEQ within 15 days of the receipt of final sampling results documenting the exceedance. Resampling to confirm the existence or non-existence of the exceedance will be conducted within two weeks of the documentation of the initial exceedance, and the results of the confirmation sampling will be reported in writing to the TCEQ within 15 days of the receipt of the final confirmation sampling results.

If a release is indicated by a confirmed PCL exceedance in a down-gradient monitoring well, this will be considered an indication of affected groundwater and an investigation to determine the extent of the release will be conducted and a report documenting the results of the investigation will be submitted to the TCEQ within 120 days of receipt of the final confirmation sampling results, along with a proposed remedial action plan. Additional monitoring and/or investigation will be performed at the written direction of the TCEQ to evaluate whether an exceedance in a crossgradient or up-gradient well is related to an on-Site release.

#### North CAMU

Down-gradient monitoring well sampling results will be qualitatively compared to background monitoring well data as the background data set is developed using groundwater data from PMW-19R and from MW-45.



Following two years of quarterly sampling, each well's data will be assessed for increasing trends (though the values may still be less than the PCL) by using the Mann-Kendall Test for Monotonic Trends. Statistical analysis will begin after the minimum four samplings have been acquired for the Mann-Kendall Test. Additional monitoring and/or investigation will be performed at the written direction of the TCEQ to evaluate whether an exceedance in a cross-gradient or up-gradient well is related to an on-Site release.

Down-gradient monitoring well sampling results will be qualitatively compared to background monitoring well data from PMW-19R and MW-45, which have been monitored as background wells since June 2014 as a part of the North CAMU groundwater monitoring program. A more detailed, statistical approach for comparing background data and down-gradient data may be developed once the background data set is sufficiently robust for such a comparison. Electronic and hard copies of all laboratory analytical results, including a database of analytical results from background wells, will be maintained to allow for determination of statistical significance in the future.

#### **FOP**

COC concentrations and water level elevations will be monitored both upgradient and downgradient of each section of the funnel and gate PRB. The funnel and gate PRB will be determined to be functioning properly as long as COC concentrations downgradient of the funnel and gate PRB are below the applicable PCLs. Increased water levels along the slurry wall portions of the funnel and gate PRB or increased COC concentrations (above applicable PCLs) downgradient of the PRB will indicate additional evaluation or actions are required. If downgradient COC concentrations are detected above applicable PCLs and confirmed through resampling (as indicated in the FOP groundwater monitoring plan), additional groundwater monitoring may be conducted or additional response actions may be evaluated, proposed, or implemented, if conditions warrant.

#### **B.3.e Monitoring well network**

The well systems for groundwater monitoring at the North CAMU and other disposal areas within the FOP are shown on Tables VI.B.3.b-1 and VI.B.3.b-2, respectively. These tables include designations for wells that are a part of both corrective action groundwater monitoring (applicable to the FOP and North CAMU) and detection monitoring (applicable to the North CAMU).

#### **B.3.f** Sampling parameters

The sampling parameters for detection monitoring at the North CAMU and other disposal areas within the FOP are shown on Tables VI.B.3.c-1 and VI.B.3.c-2, respectively.

### B.3.g Monitoring well design

Well construction diagrams for the monitoring wells listed in Table VI.B.3.b-1 are included in Attachment C to this Geology Report. It is noted that In some instances, insufficient space was available in the column for placement of both two feet of bentonite above the sand interval and two feet of concrete above the bentonite interval due to the



length of the screened interval. Additionally, there are instances where Texas State Well Reports submitted by the drilling contractors differ from construction information provided on the well construction logs prepared by the geologist performing field oversight. For wells that are not proposed to be abandoned, Golder will request a variance from the TWDB for wells that have alternate construction due to Site conditions and will work with the drilling contractors to have the Texas State Well Reports corrected where appropriate. If the variance is not granted by TWDB or the drilling contractors responsible for submitting well reports are not able to correct the reports, the surface completions and/or wells will be replaced with wells that meet applicable requirements.

#### B.3.h Monitoring well network

The locations of the monitoring wells at the Site are shown on Figure VI.B-1. A recent potentiometric surface map showing the direction of groundwater flow at the North CAMU is included as Figure VI.B-3. A historical potentiometric surface map covering the rest of the FOP is included as Figure VI.B-2.

#### B.3.i Site-specific groundwater

Based on an average of groundwater elevations measured in the proposed detection monitoring wells between December 2011 and May 2018, groundwater is typically encountered at approximately 10 feet below grade (635 feet amsl) in the uppermost aquifer. The uppermost aquifer is situated above the Eagle Ford Formation and consists of clay-rich alluvial soils of Quaternary age ranging in thickness from 14 to 24 feet. Groundwater at the Site generally flows towards the North Tributary or Stewart Creek.

# C. EXEMPTION FROM GROUNDWATER MONITORING FOR AN ENTIRE FACILITY

No exemption from groundwater monitoring is requested for the FOP as part of this Part B RCRA Permit Renewal Application.

#### D. UNSATURATED ZONE MONITORING

This section is not applicable - no land treatment units are present at the FOP.

## REFERENCES

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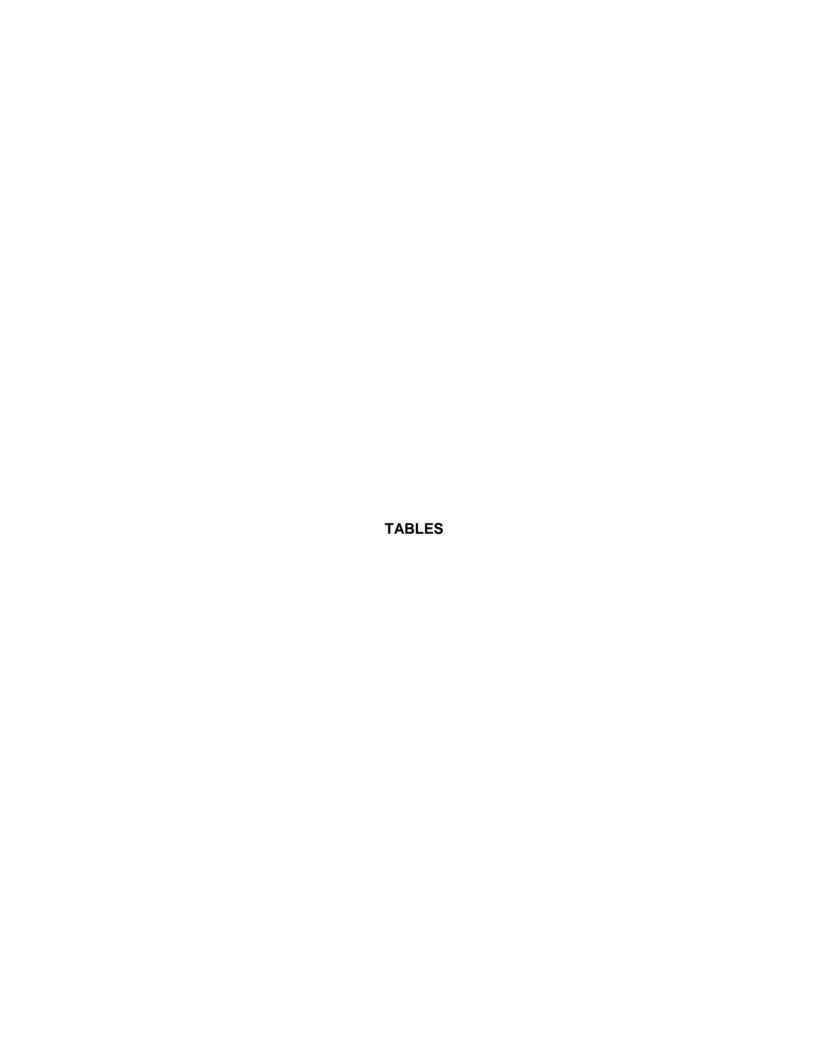


Table VI.A.1: Major Geologic Formations
Unit/Waste Management Area: Former Operating Plant

Names of Major Geologic	Lithology of the Major	Farmetian Thislesses	Depth to Top of Formation			
Formation(s) Beneath the Facility	Geologic Formation	Formation Thickness	feet above/below MSL	feet BGS		
Quaternary Undivided Surficial Deposits	Sand, clay, silt, and gravel; mostly colluvium and minor alluvium. <sup>1</sup>	10-30 feet <sup>2</sup>	Approximately 610 to 685 ft above MSL based on boring logs and survey data	Typically 0 ft BGS		
Austin Chalk	Light gray massive chalk with some calcareous interbeds and parting; middle part mainly light gray bedded marl with massive chalk interbeds. <sup>1</sup>	600 feet <sup>3</sup>		Not found due to erosion caused by Stewart Creek and the North Tributary		
Eagle Ford Shale	Medium to dark gray shale (fine- grained, fissile, sedimentary rock composed of clay-sized and silt- sized particles); commonly selenitic (contains gypsum) and bituminous with thin platy beds of sandstone and sandy limestone in middle and upper parts. <sup>1</sup>	300-400 feet <sup>3</sup>	Approximately 580 to 685 ft above MSL based on boring logs and survey data	Near surface to approximately 30 ft BGS based on boring logs		
Woodbine Group	Marine beds of sand, clay, sandstone, and shale	500 feet <sup>3</sup>	Approximately 180 to 385 ft above MSL based on formation thickness above	Approximately 300 to 430 ft BGS based on formation thickness above		
Washita Group	Predominantly limestone, shale, clay, and marl and yield only small amounts of water.4	250 feet⁴	Approximately 115 to 320 ft below MSL based on formation thickness above	Approximately 800 ft BGS		

#### Notes:

BGS - below ground surface MSL - mean sea leve

#### References

Reviewed by AMF



<sup>&</sup>lt;sup>1</sup> McGowen, J.H.; T.F. Hentz; T.F. Owen; D.E. Owen; M.K. Pieper; C.A. Shelby; and V.E. Barnes. "Geological Atlas of Texas, Sherman Sheet." 1991.

<sup>&</sup>lt;sup>2</sup> Golder Associates. "Affected Property Assessment Report, Exide Frisco Recycling Facility." May 2014.

<sup>&</sup>lt;sup>3</sup> United States Geological Survey. Texas Geology Web Map Viewer. http://txpub.usgs.gov/DSS/texasgeology/. Accessed July 18, 2016.

<sup>&</sup>lt;sup>4</sup> Nordstrom, Phillip L. "Occurrence, Availability, and Chemical Quality of Ground Water in the Cretaceous Aquifers of North-Central Texas." 1982.

# Table VI.A.4-1: Waste Management Area Subsurface Conditions North CAMU

Boring Number	Depth Below	Stratum	USC Symbol	Liquid Limit	Plasticity Index	Percent Passing	Permeabi	lity (cm/s)	Percent Porosity		
Dorling Namber	Grade (ft)	Ottatum	ooo oyiiiboi	Liquid Lillin	r lasticity index	#200 Sieve	Horizontal Vertical		r creent r orosity		
SB-6	3-4										
SB-8	4.5-6	Uppermost layer consisting of		Minimum: 39	Minimum: 21	Minimum: 54.4		-8	Minimum: 0.50		
SB-9	1-2	dark colored clays of moderate	СН	Maximum: 75	Maximum: 47	Maximum: 88.1	NA	Minimum: 1.5*10 <sup>8</sup> Maximum: NA	Maximum: NA		
SB-10	3-4	plasticity. This layer contains	CIT	Average: 59.7	Average: 37.3	Average: 71.3	INA	Average: NA	Average: NA		
SB-15	0-2	organics near the surface.		Average: 55.7	Avelage. 37.3	Avelage. 71.5		Average. NA	Average. NA		
SB-15	4-6										
SB-3	14-15										
SB-4	20-21	Deeper clays of moderate to									
SB-5	14-16	high plasticity. There are									
SB-5	18-19	layers of clayey gravel,									
SB-9	15-16	typically 2 to 4 feet thick,									
SB-10	10-11	present within this stratum. The clayey gravel pinches out		Minimum: 27 Maximum: 81	Minimum: 10 Maximum: 54	Minimum: 24.8 Maximum: 97	Minimum: 2.2*10 <sup>6</sup> Maximum: 3.4*10 <sup>2</sup>	Minimum: 2.7*10 <sup>°9</sup> Maximum: NA			
SB-15	9-11		tual CAMU footprint be present in the corner of the CAMU. ttend to the top of						Minimum: 0.55		
SB-15	14-16	•							Maximum: NA		
SB-15	19-21	, ,		Average: 40	Average: 52.4	Average: 8.7*10 <sup>3</sup>	Average: NA	Average: NA			
SB-17	0-2	Clays extend to the top of									
SB-17	4-6	Eagle Ford Shale though in									
SB-17	9-11	some locations clays are									
SB-17	14-16	separated from the shale by a									
SB-17	19-21	thin layer of sand.									
SB-3	8-9	1									
SB-1	19-20			Minimum: 55	Minimum: 31	Minimum: NA			Minimum: 0.05		
SB-6	20-21	]		Maximum: 70	Maximum: 43	Maximum: NA			Maximum: NA		
SB-15	24-26	1	011	Average: 62.5	Average: 37	Average: NA			Average: NA		
2013-C2L-01	13.5-15	Eagle Ford Shale	СН				NA	NA			
2013-C2L-02	14-18	1		NA	NA	NA			NA		
2013-C2L-07	17.5-18	<b>-</b>									

Notes:

cm/s - centimeters per second

NA - not analyzed

Data obtained from RMT/Jones and Neuse Notification of an On-Site Class II Industrial Waste Landfill, September 1995.

Percent porosity calculations are based off of Freeze, R.A. and J.A. Cherry, Groundwater, 1979.

Additional information on subsurface conditions is included on boring logs included as Attachment B.

Prepared by VK, BCW Checked by GS, EPW Reviewed by TR, AMF



# Table VI.A.4-2: Waste Management Area Subsurface Conditions

Remediation Consolidation Area (RCA)

Boring Number	Depth Below	Stratum	USC Symbol	Liquid Limit	Plasticity Index	Percent Passing	Permeability (cm/s)	
Dorning Number	Grade (ft)	Otratum	CGC Symbol Elquid Ellilli		r lasticity macx	#200 Sieve	Horizontal	Vertical
RCA-BH-01	2-3.5							
RCA-BH-01	3.5-5							
RCA-BH-02	1.5-3							
RCA-BH-02	3-4.5							
RCA-BH-03	1.5-3							
RCA-BH-03	8.5-10							
RCA-BH-03	10-12	Uppermost layer consisting of						
RCA-BH-03	13.5-15	dark colored clays of low to		Minimum: 46	Minimum: 33	Minimum: 67.3		Minimum: 4.47*10 <sup>7</sup>
RCA-BH-03	23.5-25	moderate plasticity. This layer	CL	Maximum: 50	Maximum: 36	Maximum: 88.3	NA	Maximum: 2.94*10 <sup>8</sup>
RCA-BH-04	2-3.5	contains organics near the		Average: 48	Average: 35	Average: 77.8		Average: 2.38*10 <sup>8</sup>
RCA-BH-04	3.5-5	surface.						
RCA-BH-04	7-9	1						
RCA-BH-04	9-10.5							
RCA-BH-04	14-15.5	1						
RCA-BH-04	18.5-20							
RCA-BH-05	2-3.5							
RCA-BH-05	3.5-5							
RCA-BH-01	10.5-12							
RCA-BH-01	14-16	1						
RCA-BH-02	9-10.5	1						
RCA-BH-02	11-13	1						
RCA-BH-02	14-15.5	Deeper clays of moderate to		Minimum: 51	Minimum: 33			Minimum: 2.42*10 <sup>8</sup>
RCA-BH-03	3-4.5	high plasticity. Clays extend to the top of Eagle Ford Shale.	CH	Maximum: 64 Average: 58	Maximum: 47 Average: 40	NA	NA	Maximum: NA
RCA-BH-04	12-14	the top of Eagle Ford Shale.						Average: NA
RCA-BH-05	8.5-10.5	1						
RCA-BH-05	10.5-12	1						
RCA-BH-05	13.5-15.5	<b>1</b>						
RCA-BH-01	19-20.5							
RCA-BH-01	23.5-25	]						
RCA-BH-02	19-20.5	]						
RCA-BH-02	23.5-25	<b>1</b>						
RCA-BH-03	18.5-20	1						
RCA-BH-04	23.5-25	Eagle Ford Shale	СН	NA	NA	NA	NA	NA
RCA-BH-05	18.5-20	1						
RCA-BH-05	23.5-25	1						
MW-21	10.5-15	<b>1</b>						
MW-22	12.3-15	<b>1</b>						
2012-NDA-2	13.3-18	1						

Notes:

cm/s - centimeters per second

NA - not analyzed

Data obtained by Golder in July 2018

Additional information on subsurface conditions is included on boring logs included as Attachment B.

Prepared by PJJ, BCW Checked by MSG, EPW Reviewed by KMB, AMF



Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
				(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
rth CAMU Mon	itoring Wells	Ī	01/21/14	13.29	647.57		Π
			06/17/14	13.12	647.74		
			09/22/14	13.78	647.08		
			12/16/14	14.18	646.68		
			03/16/15	12.04	648.82		
			06/04/15	9.74	651.12		
			09/09/15	13.28	647.58		
			12/14/15	11.30	649.56		
			03/03/16	11.73	649.13		
MW-45	660.86	10-20	05/31/16 09/07/16	11.79 13.11	649.07 647.75	646.68	651.12
			12/01/16	13.26	647.60		
			03/01/17	12.60	648.26		
			07/11/17	12.70	648.16		
			08/28/17	12.93	647.93		
			11/28/17	13.50	647.36		
			02/12/18	13.22	647.64		
			05/09/18	12.71	648.15		
			09/24/18	12.18	648.68		
			12/04/18	12.49	648.37 628.38		
			03/11/13 04/05/13	17.69 17.02	629.05		
			04/29/13	17.29	628.78	626.92	636.42
			01/21/14	18.10	627.97		
			06/17/14	17.15	628.92		
		7-21	09/22/14	18.65	627.42		
			12/16/14	19.15	626.92		
			03/16/15	17.30	628.77		
	646.07		06/04/15 09/09/15	9.65 16.23	636.42 629.84		
			12/14/15	12.97	633.10		
LMW-5			03/03/16	10.28	635.79		
			05/31/16	10.81	635.26		
			09/07/16	15.64	630.43		
			12/01/16	15.76	630.31		
			03/01/17	13.44	632.63		
			07/11/17 08/28/17	13.32 14.89	632.75 631.18		
			11/28/17	16.31	629.76		
			02/12/18	14.95	631.12		
			05/09/18	12.66	633.41		
			09/24/18	16.34	629.73		
			12/04/18	11.74	634.33		
			03/11/13	14.93	633.79		
			04/05/13	14.52	634.20		
			04/29/13 01/21/14	14.63 14.87	634.09 633.85		
			06/17/14	15.32	633.40		
			09/22/14	16.32	632.40		
			12/16/14	15.37	633.35		
			03/16/15	14.08	634.64		
			06/04/15	8.12	640.60		
			09/09/15 12/14/15	15.27 11.57	633.45 637.15		
LMW-8	648.72	7-21	03/03/16	9.90	638.82	632.40	640.60
27 0	3.0.72	, 21	05/31/16	11.56	637.16	332.40	340.00
			09/07/16	15.14	633.58		
			12/01/16	15.06	633.66		
			03/01/17	14.30	634.42		
			07/11/17	14.84	633.88		
			08/28/17	15.08	633.64		
			11/28/17 02/12/18	15.18 15.09	633.54 633.63		
			05/09/18	13.28	635.44		
			09/24/18	14.28	634.44		
	Ì	1	12/04/18	11.66	637.06		1

	тос	Screen	Measurement	Depth to	Groundwater	Minimum	Maximum	
Well ID	Elevation	Interval	Date	Groundwater (ft btoc)	Elevation (ft amsl)	Elevation (ft amsl)	Elevation (ft amsl)	
			03/11/13	16.24	647.42	(it airisi)	(it amsi)	
			04/05/13	20.21	643.45			
			04/29/13	22.14	641.52			
			01/21/14	19.85	643.81			
			06/17/14	18.78	644.88			
LMW-9	663.66	9-23	09/23/14	23.77	639.89	637.81	647.42	
			12/16/14 03/16/15	25.75 24.99	637.91 638.67			
			06/04/15	25.61	638.05			
			09/09/15	25.85	637.81			
			12/14/15	25.64	638.02			
			03/03/16	WELL DAMAGED	WELL DAMAGED			
			06/07/16	29.96	634.35			
			09/07/16	20.74	643.57			
			12/01/16 03/01/17	13.54 8.22	650.77 656.09			
			07/11/17	13.54	650.77			
LMW-9R	664.31	15-30	08/28/17	15.89	648.42	634.35	659.27	
			11/28/17	16.70	647.61			
			02/12/18	15.67	648.64			
			05/09/18	15.35	648.96			
			09/24/18	5.04	659.27			
	+		12/04/18	9.36	654.95	-		
			03/11/13 04/05/13	18.52 18.34	630.18 630.36			
			04/29/13	16.81	631.89			
			01/21/14	19.44	629.26			
		10-20	06/17/14	19.45	629.25	628.80		
			09/23/14	19.71	628.99			
			12/16/14	19.90	628.80			
			03/16/15	19.34	629.36			
			06/04/15 09/09/15	10.23 18.15	638.47 630.55			
			12/14/15	15.61	633.09		638.47	
LMW-17	648.70		03/03/16	11.93	636.77			
			05/31/16	11.51	637.19			
			09/07/16	17.71	630.99			
			12/01/16	18.08	630.62			
			03/01/17	16.16	632.54			
			07/11/17 08/28/17	16.31 17.49	632.39 631.21			
			11/28/17	18.68	630.02			
			02/12/18	17.21	631.49			
			05/09/18	14.80	633.90			
			09/24/18	19.00	629.70			
			12/04/18	13.51	635.19			
			03/11/13	20.11	628.17			
			04/05/13	19.29	628.99			
			04/29/13 01/21/14	19.62 20.18	628.66 628.10			
			06/17/14	19.31	628.97			
			09/22/14	21.81	626.47			
			12/16/14	22.11	626.17			
			03/16/15	18.95	629.33			
			06/04/15	11.77	636.51			
			09/09/15	18.60	629.68			
LMW-21	648.28	10-25	12/14/15	14.75	633.53	626.17	636.51	
LIVIVV-Z I	040.20	10-23	03/03/16 05/31/16	12.60 12.11	635.68 636.17	020.17	030.31	
			09/07/16	18.14	630.14			
			12/01/16	18.10	630.18			
			03/01/17	15.43	632.85			
			07/11/17	15.18	633.10			
			08/28/17	17.06	631.22			
			11/28/17	18.68	629.60			
	1		02/12/18 05/09/18	17.24 14.85	631.04 633.43			
				17.00	000.40	4	1	
			09/24/18	18.15	630.13			

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation	
				(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)	
			03/11/13 04/05/13	17.18 16.93	629.81 630.06			
			04/29/13	17.16	629.83			
			01/21/14	19.81	627.18			
			06/17/14	18.52	628.47			
			09/22/14	20.31	626.68			
			12/16/14	20.86	626.13			
			03/16/15 06/04/15	19.24 10.05	627.75 636.94			
			09/09/15	16.78	630.21			
			12/14/15	14.00	632.99			
LMW-22	646.99	5-20	03/03/16	10.51	636.48	626.13	636.94	
			05/31/16	10.67	636.32	1		
			09/07/16	16.19	630.80			
			12/01/16	16.42	630.57			
			03/01/17	14.40	632.59			
			07/11/17 08/28/17	14.51 15.80	632.48 631.19			
			11/28/17	17.03	629.96			
			02/12/18	15.58	631.41			
			05/09/18	13.30	633.69	1		
			09/24/18	17.27	629.72			
			12/04/18	12.06	634.93			
			03/11/13	DRY	DRY			
			04/05/13	DRY	DRY			
			04/29/13	DRY	DRY			
			01/21/14 06/17/14	22.22 22.25	659.57 659.54			
		4-19	09/23/14	22.05	659.74			
			12/16/14	DRY	DRY		1	
			03/16/15	18.23	663.56			
			06/04/15	7.60	674.19	1		
	681.79		09/09/15	20.47	661.32	659.54		
			12/14/15	6.09	675.70			
PMW-19R			03/03/16	9.83	671.96		675.70	
			05/31/16 09/07/16	17.51 19.33	664.28 662.46			
			12/01/16	15.33	666.46			
			03/01/17	6.89	674.90			
			07/11/17	10.88	670.91	1		
			08/28/17	19.19	662.60			
			11/28/17	20.75	661.04			
			02/12/18	20.61	661.18			
			05/09/18	19.24 7.58	662.55 674.21	ł		
			09/24/18 12/04/18	10.98	670.81			
			03/11/13	18.91	629.18			
			04/05/13	19.06	629.03			
			04/29/13	19.16	628.93			
			01/21/14	19.90	628.19			
			06/17/14	18.98	629.11			
			09/22/14	21.52	626.57			
			12/16/14 03/16/15	21.81 18.55	626.28 629.54			
			06/04/15	11.46	636.63			
			09/09/15	18.52	629.57	1		
			12/14/15	14.36	633.73			
PMW-20R	648.09	10-25	03/03/16	12.34	635.75	626.28	636.63	
			05/31/16	12.03	636.06			
			09/07/16	17.86	630.23 630.34	ł		
			12/01/16 03/01/17	17.75 15.09	630.34			
			03/01/17	14.84	633.25	l		
			08/28/17	17.77	630.32			
			11/28/17	18.41	629.68			
			02/12/18	16.98	631.11			
			05/09/18	14.54	633.55			
			09/24/18	17.67	630.42			
				12/04/18	13.65	634.44		

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
			01/01/14	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			01/21/14 07/11/17	11.38 10.41	630.79 631.76		
			08/28/17	10.65	631.52		
NAV 44	(40.17	. 1/	11/28/17	10.90	631.27	/20.70	(22.10
MW-41	642.17	6-16	02/12/18	10.66	631.51	630.79	632.19
			05/09/18	10.44	631.73		
			09/24/18	9.98	632.19		
			12/04/18	10.01	632.16		
			01/21/14 07/11/17	9.38 9.04	632.86 633.20		
			08/28/17	8.82	633.42		
1011 40		5.45	11/28/17	8.51	633.73	400.04	(05.54
MW-42	642.24	5-15	02/12/18	8.21	634.03	632.86	635.54
			05/09/18	8.86	633.38		
			09/24/18	6.70	635.54		
			12/04/18	7.45	634.79		
			07/11/17 08/28/17	6.17 6.51	632.11 631.77		
			11/28/17	6.81	631.47		
MW-47	638.28	7.5-15	02/12/18	6.04	632.24	631.47	633.75
			05/09/18	5.75	632.53		
			09/24/18	4.78	633.50		
			12/04/18	4.53	633.75		
			12/13/11	11.54	635.70		
			01/16/12	11.47	635.77		
			04/29/13 01/21/14	13.72 11.38	633.52 635.86		
			07/11/17	10.92	636.32		
P-1	647.24	10-20	08/28/17	11.42	635.82	633.33	638.21
			11/28/17	11.47	635.77		
			02/12/18	11.03	636.21		
			05/09/18	10.05	637.19		
			09/24/18	9.05 9.03	638.19		
Former Operating	Blant Manita	ring Wolle	12/04/18	9.03	638.21		l
Former Operating	Fiailt World	ing wens	12/13/11	3.62	679.10		
			01/16/12	3.74	678.98		
			02/13/12	1.87	680.85		
B1R	682.72	49.5-59.5	03/11/13	4.64	678.08	677.25	680.85
			04/05/13	4.52	678.20		
			04/29/13	4.81	677.91		
			01/21/14	5.47	677.25		
			12/13/11 01/16/12	DRY DRY	DRY DRY		
			02/13/12	9.41	640.82		
B3R	650.23	4-14	03/11/13	14.92	635.31	635.27	640.82
			04/05/13	14.96	635.27		
ĺ			04/29/13	12.96	637.27		
			01/21/14	12.66	637.57		
ĺ			12/13/11	8.67	655.91		
ĺ			01/16/12	8.01	656.57		
B4R	664.58	4-9	02/13/12 03/11/13	11.89 7.66	652.69 656.92	652.69	657.01
DAK	554.50	7-7	04/05/13	7.57	657.01	552.07	037.01
ĺ			04/29/13	8.79	655.79		
			01/21/14	11.86	652.72		
			12/13/11	NM	NM		
ĺ			01/16/12	13.84	631.76		
ĺ			02/13/12	13.09	632.51		
ĺ			03/11/13	14.33	631.27		
ĺ			04/05/13 04/29/13	14.31 14.52	631.29 631.08		
B7N	645.60	14-24	01/21/14	15.05	630.55	630.55	632.89
			05/09/18	12.71	632.89		
ĺ			05/22/18	13.04	632.56		
ĺ			05/27/18	13.21	632.39		
	1		06/05/18	13.59	632.01		
	1	I	06/12/18	13.67	631.93		l

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Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
				(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			12/13/11	7.31	633.38	4	
			01/16/12	8.78	631.91		
			02/13/12 03/11/13	8.84 8.39	631.85 632.30	1	
			03/11/13	8.76	631.93	1	
			04/29/13	9.06	631.63		
B9N	640.69	7-17	01/21/14	9.14	631.55	631.08	633.38
			05/09/18	9.30	631.39	1	
			05/22/18	9.22	631.47		
			05/27/18	9.61	631.08		
			06/05/18	9.44	631.25		
			06/12/18	9.43	631.26	1	
			12/13/11	10.26	618.62		
			01/16/12	10.33	618.55	1	
			02/13/12	10.92	617.96	1	
			03/11/13	9.67	619.21		
			04/05/13	9.61	619.27		
			04/29/13	10.01	618.87		
MW-16	628.88	67.5-77.5	01/21/14	12.07	616.81	616.81	619.85
IVIVV-1U	020.00	07.3-11.3	04/25/18	9.03	619.85	010.01	017.03
			05/09/18	9.21	619.67		
			05/22/18	9.14	619.74		
			05/27/18	9.14	619.74	1	
			06/05/18	11.78	617.10	1	
			06/12/18	11.82	617.06	1	
			01/24/19	9.07	619.81		
			12/13/11	9.05	618.95		
			01/16/12	9.12	618.88		
		02/13/12 8.67	619.33				
			03/11/13	8.92	619.08		
			04/05/13	8.84	619.16		
			04/29/13	9.22	618.78		
MW-16S	628.00	7-17	01/21/14	9.42	618.58	618.56	619.33
10100-103	028.00	7-17	04/25/18	9.02	618.98	010.50	017.33
			05/09/18	9.03	618.97		
			05/22/18	9.15	618.85		
			05/27/18	9.28	618.72		
			06/05/18	9.38	618.62		
			06/12/18	9.44	618.56		
			01/24/19	8.77	619.23		
			12/13/11	8.55	620.45		
			01/16/12	8.62	620.38		
			02/13/12	8.28	620.72		
			03/11/13	8.29	620.71	1	1
			04/05/13	8.27	620.73	1	1
			04/29/13	8.71	620.29	4	1
MW-17	629.00	7-17	01/21/14	8.53	620.47	620.29	620.73
			04/25/18	8.48	620.52	1	1
			05/09/18	8.56	620.44	1	1
	1		05/22/18	8.55	620.45	1	1
			05/27/18	8.65	620.35	4	1
	1		06/05/18	8.61	620.39	4	1
			06/12/18	8.59	620.41		
			12/13/11	1.86	631.14	4	1
			01/16/12	1.96	631.04	4	1
			02/13/12	1.86	631.14	4	1
			03/11/13	2.53	630.47	4	1
			04/05/13	2.51	630.49	4	1
	1		04/29/13	3.19	629.81	1	]
MW-18	633.00	5.5-15.5	01/21/14	4.25	628.75	628.34	631.14
			05/09/18	4.21	628.79	1	1
			05/22/18	4.04	628.96	1	1
			05/27/18	4.66	628.34	1	1
			06/05/18	4.58	628.42	]	1
	1		06/12/18	4.25	629.73	]	]
		1	01/24/19	3.27	629.73	1	1

Well ID	тос	Screen	Measurement	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
	Elevation	Interval	Date	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			03/11/13	3.71	633.18		
			04/05/13	3.62	633.27		
			04/29/13	4.59	632.30		
			01/21/14	4.21	632.68		
MW-22	636.89	3-13	05/09/18	3.64	633.25	629.87	633.27
			05/22/18	5.66	631.23		
			05/27/18	6.46	630.43		
			06/05/18	7.02	629.87		
			06/12/18	5.41	631.48		
			03/11/13	7.13	637.02		
			04/05/13	7.04	637.11		
			04/29/13	7.34	636.81		
			01/21/14	7.52	636.63		
MW-23	644.15	4.5-19.5	05/09/18	6.26	637.89	635.27	637.89
			05/22/18	6.50	637.65		
			05/27/18	6.48	637.67		
			06/05/18	8.88	635.27		
			06/12/18	6.93	637.22		
			03/11/13	9.98	621.95		
			04/05/13	9.52	622.41		
			04/29/13	9.21	622.72		
			01/21/14	5.80	626.13		
			07/29/14	5.79	626.14		
			09/23/14	8.90	623.03		
			06/12/15	5.32	626.61		
			09/08/15	5.72	626.21		
			12/17/15	5.32	626.61		
			02/29/16	5.41	626.52		
			09/08/16	5.51	626.42	4	
			12/02/16	5.65	626.28		
MW-26	631.93	5-15	03/02/17	5.81	626.12	621.95	626.61
			05/04/17	6.21	625.72		
			08/28/17	5.56	626.37		
			11/27/17	5.71	626.22		
			02/15/18	5.75	626.18		
			04/25/18	5.65	626.28		
			05/09/18	5.65	626.28		
			05/22/18	5.61	626.32		
			05/27/18	5.51	626.42		
			06/05/18	8.05	623.88		
			06/12/18	5.59	626.34		
			09/24/18	NM	NM (2), 22		
			12/04/18	5.60	626.33		
			03/11/13	6.03	627.39		
			04/05/13	5.92	627.50		
			04/29/13	5.64	627.78		
			01/21/14	4.90	628.52		
			04/24/18	5.67	627.75	404.55	,
MW-27	633.42	5-15	05/09/18	5.74	627.68	626.80	628.52
			05/22/18	5.84	627.58		
	1		05/27/18	5.96	627.46		
			0.4.40= 11.5		(0= ::		
			06/05/18 06/12/18	5.98 6.02	627.44 627.40		

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	(ft amsl) 620.43	(ft amsl) 620.43 626.55 626.95 626.89 626.94 627.47 628.30 627.16 627.84 627.72 627.84 627.72 627.84 627.26 627.00 627.71 627.61	(ft btoc)  13.08 6.96 6.56 6.62 6.57 6.04 5.21 6.35 5.67 5.79 5.67 6.25	03/11/13 04/05/13 04/29/13 01/21/14 07/29/14 09/23/14 06/12/15 09/08/15 12/17/15 02/29/16	Interval	Elevation	
43 628.30	620.43	626.55 626.95 626.89 626.94 627.47 628.30 627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	6.96 6.56 6.62 6.57 6.04 5.21 6.35 5.67 5.79 5.67 6.25	04/05/13 04/29/13 01/21/14 07/29/14 09/23/14 06/12/15 09/08/15 12/17/15			
43 628.30	620.43	626.95 626.89 626.94 627.47 628.30 627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	6.56 6.62 6.57 6.04 5.21 6.35 5.67 5.79 5.67 6.25	04/29/13 01/21/14 07/29/14 09/23/14 06/12/15 09/08/15 12/17/15			
43 628.30	620.43	626.89 626.94 627.47 628.30 627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	6.62 6.57 6.04 5.21 6.35 5.67 5.79 5.67 6.25	01/21/14 07/29/14 09/23/14 06/12/15 09/08/15 12/17/15			
43 628.30	620.43	626.94 627.47 628.30 627.16 627.84 627.72 627.84 627.26 627.26 627.00 627.71 627.61	6.57 6.04 5.21 6.35 5.67 5.79 5.67 6.25	07/29/14 09/23/14 06/12/15 09/08/15 12/17/15			
43 628.30	620.43	627.47 628.30 627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	6.04 5.21 6.35 5.67 5.79 5.67 6.25	09/23/14 06/12/15 09/08/15 12/17/15			
43 628.30	620.43	628.30 627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	5.21 6.35 5.67 5.79 5.67 6.25	06/12/15 09/08/15 12/17/15			
43 628.30	620.43	627.16 627.84 627.72 627.84 627.26 627.00 627.71 627.61	6.35 5.67 5.79 5.67 6.25	09/08/15 12/17/15			
43 628.30	620.43	627.72 627.84 627.26 627.00 627.71 627.61 626.74	5.79 5.67 6.25				
43 628.30	620.43	627.84 627.26 627.00 627.71 627.61 626.74	5.67 6.25	02/29/16			
43 628.30	620.43	627.26 627.00 627.71 627.61 626.74	6.25				
43 628.30	620.43	627.00 627.71 627.61 626.74		09/08/16			
43 628.30	620.43	627.71 627.61 626.74	6.51	12/02/16			
		627.61 626.74	. —	03/02/17	4.5-14.5	633.51	MW-29
		626.74	5.80	05/04/17			
			5.90	08/28/17			
			6.77	11/27/17			
		626.74	6.77	02/15/18			
		627.44	6.07	04/24/18			
		627.56	5.95	05/09/18			
		627.43	6.08	05/22/18			
		627.54 626.42	5.97 7.09	05/27/18 06/05/18			
		620.42	5.94	06/12/18			
		027.57 NM	5.94 NM	09/24/18			
		627.39	6.12	12/04/18			
		629.29	10.41	01/21/14		+	
		629.43	10.41	05/09/18			
		628.63	11.07	05/22/18			
34 630.46	627.34	628.12	11.58	05/27/18	10-20	639.70	MW-39
34 030.40	027.34	627.38	12.32	06/05/18	10-20	037.70	10100-37
		627.34	12.36	06/12/18			
		630.46	9.24	01/24/19			
		630.11	5.40	01/21/14			
		629.61	5.90	05/09/18			
		628.90	6.61	05/22/18			
35 630.11	628.35	628.74	6.77	05/27/18	5-15	635.51	MW-40
		628.45	7.06	06/05/18			
		628.35	7.16	06/12/18			
		630.52	14.93	01/21/14			
52 630.52	630.52	WELL COMPROMISED	WELL COMPROMISED	05/09/18	10-20	645.45	MW-43
		628.29	9.21	01/21/14			
		627.74	9.76	04/24/18			
		627.79	9.71	05/09/18			
83 628.29	626.83	627.32	10.18	05/22/18	5-15	637.50	MW-44
		627.12	10.38	05/27/18			
		626.95	10.55	06/05/18			
		626.83	10.67	06/12/18			
					ant Wells	Operating Pi	ditional Forme
	<u> </u>	621.48	9.95	12/13/11			
		621.52	9.91	01/16/12			
		621.67	9.76	02/13/12			
		621.71	9.72	03/11/13			
		621.75	9.68	04/05/13			
			10.04				
	621.02				6.5-16.5	631.43	B5N
02 621.75			10.21				
02 621.75		621.22	10.21	05/09/18			
02 621.75			10.32				
02 621.75							
02 621.75		621.04					
02 621.75		/ 21 27	10.36	06/12/18			
02 621.75		621.07		0.1001		(20.74	LMW-1
	627.44	629.60	9.14	04/29/13	5-20	638.74	
	627.44	629.60 627.44	9.14 11.30	01/21/14	5-20	638.74	
44 629.60	627.44	629.60 627.44 629.89	9.14 11.30 11.12	01/21/14 04/29/13	5-20 6-21		LMW-2
44 629.60		629.60 627.44 629.89 628.78	9.14 11.30 11.12 12.23	01/21/14 04/29/13 01/21/14		641.01	LMW-2
44 629.60 78 629.89		629.60 627.44 629.89 628.78 627.70	9.14 11.30 11.12 12.23 12.08	01/21/14 04/29/13 01/21/14 04/29/13			LMW-2
44 629.60 78 629.89	628.78	629.60 627.44 629.89 628.78	9.14 11.30 11.12 12.23	01/21/14 04/29/13 01/21/14	6-21	641.01	
	621.02	621.52 621.67 621.71 621.75 621.39 621.12 621.22	9.95 9.91 9.76 9.72 9.68 10.04 10.31 10.21 10.21	12/13/11 01/16/12 02/13/12 03/11/13 04/05/13 04/29/13 01/21/14 04/25/18	<i>ant Wells</i> 6.5-16.5	631.43	B5N LMW-1

Well ID	TOC	Screen	Measurement	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
	Elevation	Interval	Date	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			12/13/11	8.76	636.06		
			01/16/12	8.71	636.11		
			02/13/12	6.64	638.18		
			03/11/13	8.71	636.11		
			04/05/13	8.63	636.19		
MW-10	644.82	7-17	04/29/13 01/21/14	8.37 8.22	636.45 636.60	636.06	638.22
IVIVV-10	044.02	7-17	05/09/18	6.60	638.22	030.00	030.22
			05/22/18	6.79	638.03		
			05/27/18	6.72	638.10		
			06/05/18	7.11	637.71		
			06/12/18	7.23	637.59		
			08/01/18	8.15	636.67		
			12/13/11	8.62	617.92		
			01/16/12	19.61	606.93		
MW-11	/2/ E4	7-17	02/13/12 03/11/13	7.73 5.94	618.81 620.60	606.93	620.60
IVIVV-II	626.54	7-17	04/05/13	7.64	618.90	000.93	620.60
			04/29/13	9.13	617.41		
			01/21/14	10.05	616.49		
			12/13/11	8.54	626.62		
			01/16/12	8.62	626.54		
			02/13/12	8.14	627.02		
			03/11/13	8.22	626.94		
			04/05/13	8.17	626.99		
MW-12	635.16	8-18.5	04/29/13	8.47	626.69	626.42	627.02
			01/21/14	8.55	626.61		
			05/09/18 05/22/18	8.35 8.14	626.81 627.02		
			05/27/18	8.74	626.42		
			06/05/18	8.37	626.79		
			06/12/18	8.42	626.74		
	1		12/13/11	15.75	621.33		
			01/16/12	15.83	621.25		
			02/13/12	15.57	621.51	<u> </u> 	
			03/11/13	15.42	621.66		
			04/05/13	15.33	621.75		
MW-13	637.08	12-22	04/29/13	15.79	621.29	620.63	621.75
			01/21/14	16.20 15.96	620.88 621.12		
			05/09/18 05/22/18	16.25	620.83		
			05/27/18	16.32	620.76		
			06/05/18	16.45	620.63		
			06/11/18	16.40	620.68		
			12/13/11	5.88	625.13		
			01/16/12	5.94	625.07		1
			02/13/12	5.79	625.22		
			03/11/13	5.81	625.20		
			04/05/13	5.74	625.27		
MW-14	631.01	7-17	04/29/13	6.03	624.98	624.81	625.27
			01/21/14 05/09/18	6.20	624.81 624.94		
			05/22/18	5.97	625.04		1
			05/27/18	5.99	625.02		1
			06/05/18	6.02	624.99		1
			06/12/18	6.06	624.95		1
			12/13/11	12.08	614.50		İ
					614.45		1
			01/16/12	12.13	014.43		
			02/13/12	6.83	619.75		
MW-15	626.58	12-22	02/13/12 03/11/13	6.83 11.53	619.75 615.05	612.74	619.75
MW-15	626.58	12-22	02/13/12	6.83	619.75	612.74	619.75

Well ID	тос	Screen	Measurement	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
Well ID	Elevation	Interval	Date	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			03/11/13	3.24	632.75	(** 2.112.)	(***
			04/05/13	3.17	632.82		
			04/29/13	4.39	631.60		
			01/21/14	3.50	632.49		
MW-21	635.99	3-13	05/09/18	2.91	633.08	631.60	633.08
			05/22/18	3.65	632.34		
			05/27/18	4.10	631.89		
			06/05/18	4.35	631.64		
			06/12/18	3.87	632.12		
			03/11/13	21.77	621.19		
			04/05/13	21.72	621.24		
			04/29/13	22.26	620.70		
			01/21/14	22.54	620.42		
MW-24	(42.0/	14-29	04/25/18	21.94	621.02	620.42	621.24
WW-24	642.96	14-29	05/09/18	21.91	621.05	020.42	021.24
			05/22/18	22.17	620.79		
			05/27/18	22.33	620.63		
			06/05/18	22.41	620.55		
			06/12/18	22.33	620.63		
			03/11/13	12.29	623.56		
MM/ 25	/25.05	7-22	04/05/13	11.71	624.14	/22 F/	(24.4/
MW-25	635.85	1-22	04/29/13	11.39	624.46	623.56	624.46
			01/21/14	11.59	624.26		
			04/05/13	11.47	633.68		
			04/29/13	11.26	633.89		
			01/21/14	11.85	633.30		
		45.15 12-32	05/22/18	11.15	634.00		
MW-30	645.15		05/27/18	11.22	633.93	632.85	634.38
			06/05/18	11.41	633.74		
			06/12/18	11.31	633.84		
			08/01/18	12.30	632.85		
			12/03/18	10.77	634.38		
			05/13/13	10.58	626.13		
			01/21/14	10.87	625.84		
			07/29/14	10.81	625.90		
	1		09/23/14	11.32	625.39		
	1		06/12/15	9.61	627.10		
	1		09/08/15	10.53	626.18		
	1		12/17/15	9.42	627.29		
	1		02/29/16	9.78	626.93		
			09/08/16	9.90	626.81		
			12/02/16	10.21	626.50		
			03/02/17	12.23	624.48		
MW-31	636.71	8-23	05/04/17	10.58	626.13	624.48	627.29
	130.7.	- 20	08/28/17	9.99	626.72		327.27
	1		11/27/17	10.82	625.89		
	1		02/15/18	10.90	625.81		
	1		04/24/18	10.35	626.36		
			05/09/18	10.19	626.52		
	1		05/22/18	10.42	626.29		
	1		05/27/18	10.40	626.31		
	1		06/05/18	10.52	626.19		
			06/12/18	10.31	626.40		
	1		08/01/18	10.31	626.40		
			09/24/18	NM	NM		
			12/04/18	10.42	626.29		

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
	Lievation	IIILEIVAI	Date	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			01/21/14	4.16	626.80		
			07/29/14	4.59	626.37		
			09/23/14 06/12/15	4.59 3.79	626.37 627.17		
			09/08/15	R	R	1	
			02/29/16	3.57	627.39		
			06/01/16	3.62	627.34	1	
			09/08/16	3.83	627.13		
			12/02/16	3.40	627.56		
			03/02/17	3.26	627.70		
MW-32	630.96	2.5-5	05/04/17	3.49	627.47	626.37	628.26
			08/28/17 11/27/17	3.55 3.54	627.41 627.42		
			02/15/18	3.21	627.75	1	
			04/24/18	3.24	627.72		
			05/09/18	3.30	627.66	1	
			05/22/18	3.17	627.79		
			05/27/18	3.18	627.78		
			06/05/18	3.11	627.85		
			06/12/18	3.06	627.90		
			09/24/18	NM 2.70	NM (20.2)		
			12/04/18	2.70	628.26		
			01/21/14 07/29/14	1.09 2.14	631.50 630.45		
			09/23/14	1.55	631.04	1	
			12/17/15	1.21	631.38		
			02/29/16	1.07	631.52	1	
			06/01/16	1.09	631.50	1	
			09/08/16	1.07	631.52		
			12/02/16	0.95	631.64		
			03/02/17	0.88	631.71		
MMA/ 22	632.59	2.5-5	05/04/17	0.91	631.68	/20.45	(21.70
MW-33	632.59		08/28/17 11/27/17	0.86 0.85	631.73 631.74	630.45	631.79
			02/15/18	0.81	631.78		
			04/24/18	0.85	631.74		
			05/09/18	0.80	631.79	1	
			05/22/18	0.85	631.74		
			05/27/18	0.81	631.78		
			06/05/18	R	R		
			06/12/18	0.91	631.68		
			09/24/18 12/04/18	NM 0.95	NM (21.74		
	-				631.64		
			01/21/14 07/29/14	4.31 4.45	628.52 628.38	1	
			09/23/14	4.45	628.38		
			06/12/15	3.42	629.41	1	
			12/17/15	3.03	629.80		
			02/29/16	1.95	630.88		
			06/01/16	2.04	630.79		
			09/08/16	2.59	630.24		
			12/02/16	2.50 2.75	630.33	ł	
			03/02/17 05/04/17	3.93	630.08 628.90		
MW-34	632.83	2.5-5	08/28/17	2.95	629.88	628.38	630.88
			11/27/17	3.62	629.21		
	1		02/15/18	3.71	629.12	1	
			04/24/18	3.58	629.25		
			05/09/18	3.57	629.26		
			05/22/18	3.51	629.32		
			05/27/18	3.47	629.36		
			06/05/18	3.46	629.37		
			06/12/18 09/24/18	3.39 NM	629.44 NM		
	1		12/04/18	3.08	629.75		
			12/04/18	ა.სგ	024.75		

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
	Licvation	IIItervar		(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
			01/21/14	DRY	DRY		
			07/29/14 09/23/14	DRY DRY	DRY DRY		
			06/12/15	4.97	627.58		
			09/08/15	DRY	DRY		
			12/17/15	4.10	628.45		
			02/29/16	3.86	628.69		
			06/01/16	3.99	628.56		
			09/08/16	4.13	628.42		
			12/02/16	3.85	628.70		
MW-35	632.55	2.5-5	03/02/17 05/04/17	3.94 4.58	628.61 627.97	627.58	628.81
WW-35	032.55	2.5-5	08/28/17	4.16	628.39	027.30	020.01
			11/27/17	3.98	628.57		
			02/15/18	3.81	628.74		
			04/24/18	3.88	628.67		
			05/09/18	3.92	628.63		
			05/22/18	3.81	628.74		
			05/27/18	3.76	628.79		
			06/05/18 06/12/18	3.81 3.81	628.74 628.74		
			09/24/18	NM	NM		
			12/04/18	3.74	628.81		
			01/21/14	DRY	DRY		
			04/24/18	3.21	630.42		
			05/09/18	3.25	630.38		
MW-36	633.63	2.5-5	05/22/18	3.12	630.51	630.38	630.58
			05/27/18	3.11	630.52		
			06/05/18	3.05	630.58		
101/07	(00.05	F 40	06/12/18 01/21/14	3.09	630.54	(10.01	/10.01
MW-37	620.95	5-10	01/21/14	8.11 7.10	612.84 616.04	612.84	612.84
			05/10/18	6.65	616.49		
			05/22/18	6.91	616.23		
MW-38	623.14	5-15	05/27/18	7.25	615.89	615.39	616.49
			06/05/18	7.47	615.67		
			06/12/18	7.75	615.39		
			01/21/14	5.21	625.77		
			07/29/14	5.47	625.51		
			09/23/14	5.08	625.90		
			06/12/15 09/08/15	5.50 4.17	625.48 626.81		
			12/17/15	NOT ACCESSIBLE	NOT ACCESSIBLE		
			02/29/16	5.23	625.75		
			09/08/16	5.41	625.57		
			12/02/16	4.96	626.02		
			03/02/17	5.00	625.98		
			05/04/17	5.50	625.48		
NAVA/ 4/	/20.00	10.00	08/28/17	4.44	626.54	/2F 47	/07.00
MW-46	630.98	10-20	11/27/17 02/15/18	5.41 5.81	625.57 625.17	625.17	627.03
			04/24/18	3.95	627.03		
			05/08/18	4.24	626.74		
			05/22/18	4.41	626.57		
			05/27/18	4.51	626.47		
			06/05/18	4.59	626.39		
			06/12/18	4.53	626.45		
			08/01/18	5.16	625.82		
			09/24/18	NM 4.03	NM		
			11/06/18 12/03/18	4.92 4.32	626.06 626.66		
			12/03/18	4.32	626.66		
	+		12/13/11	15.91	627.64		
			01/16/12	15.94	627.61		
			02/13/12	14.31	629.24		
P-2	643.55	10-20	03/11/13	16.34	627.21	627.15	629.24
1 4	•	643.55 10-20	04/05/12	16.31	627.24		629.24
1 2			04/05/13	10.31			
1 2			04/05/13 04/29/13 01/21/14	15.44 16.40	628.11 627.15		

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater	Groundwater Elevation	Minimum Elevation	Maximum Elevation
	Lievation	Tittervar	Date	(ft btoc)	(ft amsl)	(ft amsl)	(ft amsl)
eep Groundwate	er Pre-Design	Investigation	n Monitoring Wells				
			05/22/18	10.91	628.06		
			05/27/18	11.09	627.88		
DGW-MW-1	638.97	10.2-29.7	06/05/18	11.24	627.73	627.16	628.06
			06/12/18	11.30	627.67		
			08/01/18	11.81	627.16		
			05/22/18	6.30	627.75		
			05/27/18	6.41	627.64		
DGW-MW-2	634.05	10.2-19.7	06/05/18	6.49	627.56	627.11	627.75
			06/12/18	6.51	627.54		
			08/01/18	6.94	627.11		
			05/22/18 05/27/18	5.30 5.39	627.70 627.61		
			06/05/18	5.47	627.53	•	
			06/12/18	5.54	627.46	•	
DGW-MW-3	633.00	5.2-19.7	08/01/18	6.03	626.97	626.97	628.54
2011 MINT-3	000.00	U.E 17.7	11/05/18	4.46	628.54	525.77	320.34
			03/08/19	5.04	627.96	1	1
			03/20/19	4.87	628.13	1	1
			04/23/19	4.93	628.07		
			05/22/18	3.61	628.51		
			05/27/18	3.70	628.42	1	
DGW-MW-4	632.12	10.2-19.7	06/05/18	3.81	628.31	627.67	628.51
			06/12/18	3.76	628.36	1	
			08/01/18	4.45	627.67	1	
			05/22/18	9.95	620.17		
			05/27/18	10.03	620.09	1	
DGW-MW-5	630.12	5.2-19.7	06/05/18	10.01	620.11	620.07	620.17
			06/12/18	10.02	620.10		
			08/01/18	10.05	620.07		
			05/22/18	12.92	630.06		
			05/27/18	13.01	629.97		
DGW-MW-6	642.98	15.2-29.7	06/05/18	13.21	629.77	628.51	630.06
			06/12/18	13.01	629.97		
			08/01/18	14.47	628.51		
			05/22/18	13.20	629.81		
			05/27/18	13.26	629.75		
DGW-MW-7	643.01	15.2-29.7	06/05/18	13.48	629.53	628.35	629.81
			06/12/18	13.26	629.75		
			08/01/18	14.66	628.35	ļ	ļ
			05/22/18	24.24	619.89	-	1
			05/27/18	24.34	619.79	ĺ	1
DGW-MW-8 <sup>8</sup>	643.92	15.2-29.7	06/05/18 06/12/18	24.49 24.48	619.64 619.65	618.91	620.75
			08/01/18	25.22	618.91	1	1
			01/24/19	23.17	620.75	1	1
			05/22/18	16.85	627.96		
			05/27/18	17.02	627.79	1	1
DGW-MW-9	644.81	10.2-24.7	06/05/18	17.14	627.67	627.42	627.96
DOW-WW-7	044.01	10.2-24.7	06/12/18	17.18	627.63	027.42	027.70
			08/01/18	17.39	627.42	1	1
			05/22/18	2.64	628.91	i	i
			05/27/18	2.58	628.97	1	1
DGW-MW-10	631.55	15.2-19.7	06/05/18	2.74	628.81	627.96	628.97
			06/12/18	2.67	628.88	1	]
			08/01/18	3.59	627.96	1	1
			05/22/18	7.08	624.58		
			05/27/18	5.60	626.06	1	1
DGW-MW-10S	631.66	2.7-7.2	06/05/18	6.35	625.31	624.58	628.75
			06/12/18	5.15	626.51	1	1
	1		08/01/18	2.91	628.75	1	I

### Historical Groundwater Elevation Data

Well ID	TOC Elevation	Screen Interval	Measurement Date	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft amsl)	Minimum Elevation (ft amsl)	Maximum Elevation (ft amsl)
			05/22/18	16.86	614.42		
			05/27/18	10.00	621.28		
			06/05/18	7.80	623.48		
			06/12/18	6.83	624.45		
DOW 1884 44	(04.00	100170	08/01/18	6.50	624.78	(4.4.40	(0) 01
DGW-MW-11	631.28	10.2-17.2	12/03/18	5.34	625.94	614.42	626.21
			01/02/19	5.45	625.83		
			01/23/19	5.07	626.21		
			03/08/19	5.67	625.61		
			03/19/19	6.39	624.89		
			05/22/18	5.47	626.07		
			05/27/18	4.71	626.83		
DOM 1884 440	(04.54	0017	06/05/18	6.70	624.84		100.10
DGW-MW-11S	631.54	2.2-6.7	06/12/18	1.86	629.68	624.84	629.68
			08/01/18	2.13	629.41		
			12/03/18	2.16	629.38		
DOW 1444 40		440007	01/26/19	13.26	626.96	101.01	107.01
DGW-MW-12	640.22	14.2-23.7	04/10/19	13.18	627.04	626.96	627.04

Motos.

Prepared by: JJ 01/29/14

- 1. TOC top of casing
- Updated by: AM 09/22/16, GS 06/25/17, BCW 08/06/2018, AGA 02/28/2019, EPW 04/30/2019
- 2. ft btoc below top of casing.
- Checked by: KK 09/23/16, KM 06/27/17, JS 06/13/18, EPW 08/06/2018, EPW 04/29/2019, BEF 05/01/2019 Reviewed by: THR 09/2016, AMF 08/14/2018, 05/30/2019
- ft amsl feet above mean sea level.
   NM not measured.
- Stewart Creek staff gauges were re-surveyed on May 16, 2013 as a result of displacement that occurred since the previous survey event in 2012 due to a storm event.
- 6.  $^{\star}$  Staff Gauge No. 1 damaged during storm event. No measurement collected.
- 7. R Depth to groundwater was disqualified as a field error because depth was greater than total depth of the well.
- 8. DGW-MW-8 resurveyed in January 2019 for new top of casing measurement of 643.91 ft amsl. Former top of casing measurement from May 2018 to January 2019 measured as 644.13 ft amsl.

North Corrective Action Management Unit (CAMU)

Well Number		LMW-5	LMW-8	LMW-9R	LMW-17	LMW-21	LMW-22	PMW-19R	PMW-20R	MW-45
Hydrogeologic Unit M	lonitored	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU
Туре		Observation/APOE	Observation/APOE	Observation/APOE	Observation/AMP	Observation	Observation/AMP	Background	Observation	Background
Upgradient or downg	radient	Down-gradient	Cross-gradient	Cross-gradient	Down-gradient	Down-gradient	Down-gradient	Up-gradient	Down-gradient	Up-gradient
Casing Diameter and	Material	2" ID Sch 40 PVC	2" ID Sch 40 PVC	2" Sch 40 PVC	4" ID Sch 40 PVC	2" Sch 40 FJT PVC	2" Sch 40 FJT PVC	2" Sch 40 FJT PVC	2" Sch 40 FJT PVC	2" Sch 40 PVC
Screen Diameter and	Material	2" ID machine slot PVC	2" ID machine slot PVC	2" Sch 40 PVC	4" ID machine slot PVC	2" Sch 40 FJT PVC	2" Sch 40 PVC slotted			
Screen Slot Size (inch	nes)	0.01	0.01	0.010	0.01	0.010	0.010	0.010	0.010	0.010
Top of Casing Elevati	on (feet AMSL)	646.61	648.68	664.31	648.84	648.28	646.99	681.79	648.09	660.86
Grade or Surface Elev	ration (feet AMSL)	643.27	645.57	661.39	646.34	645.11	643.32	678.45	645.2	657.90
Well Depth (feet BGS)		22.0	22.0	30	23.0	25.0	20.0	19.0	25.0	20.0
Well Depth (feet BTO	C)	25.34	25.11	32.92	25.5	28.17	23.67	22.34	27.89	22.96
	From (feet BGS)	7.0	7.0	15	10.0	10.0	5.0	4.0	10.0	10.0
Screened Interval	To (feet BGS)	21.5	21.5	30	20.0	25.0	20.0	19.0	25.0	20.0
Screened interval	From (feet BTOC)	10.34	10.11	17.92	12.50	13.17	8.67	7.34	12.89	12.96
	To (feet BTOC)	24.84	24.61	32.92	22.50	28.17	23.67	22.34	27.89	22.96
Facility Coordinates	Northing (feet)	5706.3200*	5539.0400*	7103254.02	5626.1663*	7103205.9759	7102891.2829	7,103,664.08	7103357.9244	7,103,914.51
racinty Coordinates	Easting (feet)	4174.7100*	4812.0100*	2480865.36	4507.0130*	2480099.7956	2480355.4657	2,480,920.37	2480030.2079	2,480,303.20

Notes:

\*Site coordinates

GWBU - groundwater-bearing unit

AMSL - above mean sea level

BGS - below ground surface

BTOC - below top of casing

PVC - polyvinyl chloride

APOE - Alternate Point of Exposure for Corrective Action Monitoring

AMP - Attenuation Monitoring Point for Corrective Action Monitoring

POC - Point of Compliance for Corrective Action Monitoring

Entered by EPW

Checked by GS

Reviewed by TR, AMF



Former Operating Plant (excluding the North CAMU)

Well Number		B3R	B4R	B7N	B9N	DGW-MW-9	MW-10	MW-17	MW-18
Hydrogeologic Unit N	<b>l</b> onitored	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU
Туре		POC/APOE	POC/APOE	POC/APOE	POC/APOE	POC/APOE	Observation	POC/APOE	POC/APOE
Upgradient or downg	radient	Downgradient	Downgradient	Upgradient/cross- gradient	Upgradient/cross- gradient	Upgradient/cross- gradient	Upgradient	Downgradient	Downgradient
Casing Diameter and	Material	4" Sch 40 PVC	4" Sch 40 PVC	4" Sch 40 PVC	4" Sch 40 PVC	2" Sch 40 PVC	4" Sch 40 PVC	4" Sch 40 PVC	4" Sch 40 PVC
Screen Diameter and	Material	4" Sch 40 PVC slotted	4" Sch 40 PVC slotted	4" Sch 40 PVC slotted	4" Sch 40 PVC slotted	2" Sch 40 PVC slotted	4" Sch 40 PVC slotted	4" Sch 40 PVC slotted	4" Sch 40 PVC slotted
Screen Slot Size (inc	hes)	0.01	0.01	0.01	0.01	0.010	0.01	0.01	0.01
Top of Casing Elevat	ion (feet AMSL)	650.23	664.58	645.60	640.69	644.81	644.80	629.00	633.00
Grade or Surface Ele	vation (feet AMSL)	649.23	661.40	644.08	637.02	642.22	645.12	628.58	631.84
Well Depth (feet BGS	)	14.0	9.0	24.0	17.0	25.0	17.0	17.0	15.5
Well Depth (feet BTO	C)	15.0	12.2	25.5	20.7	27.6	16.7	17.4	16.7
	From (feet BGS)	4.0	4.0	14.0	7.0	10.2	7.0	7.0	5.5
Screened Interval	To (feet BGS)	14.0	9.0	24.0	17.0	24.7	17.0	17.0	15.5
Screened interval	From (feet BTOC)	5.0	7.2	15.5	10.7	12.8	6.7	7.4	6.7
	To (feet BTOC)	15.0	12.2	25.5	20.7	27.3	16.7	17.4	16.7
Facility Coordinates	Northing (feet)	7,101,507.14	7,101,429.46	7,102,466.56	7,102,614.47	7,101,770.76	7,101,996.62	7,102,093.46	7,102,462.37
racinty Coordinates	Easting (feet)	2,480,077.05	2,479,941.99	2,480,687.51	2,480,057.47	2,480,655.11	2,480,965.05	2,479,609.56	2,479,342.35

Notes:

GWBU - groundwater-bearing unit

AMSL - above mean sea level

BGS - below ground surface

BTOC - below top of casing

PVC - polyvinyl chloride

APOE - Alternate Point of Exposure for Corrective Action Monitoring POC - Point of Compliance for Corrective Action Monitoring

Well construction information was compiled from 1) Table 5D of the Affected Property Assessment Report for the Exide Frisco Recycling Facility prepared by Golder Associates and dated May 2014, 2) well construction logs and survey information included in the Affected Property Assessment Report prepared by Pastor, Behling & Wheeler and dated 2013, and 3) well construction logs and survey information included in the Deep Groundwater Preliminary Design Investigation Report prepared by Golder and included as Appendix 3.1 to Attachment M to the Part B of this RCRA Permit Renewal Application.

Entered by GS, BEF Updated by EPW Checked by EPW, BEF Reviewed by TR, AMF



Former Operating Plant (excluding the North CAMU)

Well Number		MW-21	MW-22	MW-23	MW-26	MW-27	MW-29	MW-44
Hydrogeologic Unit I	Monitored	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU	Uppermost GWBU
Туре		POC/APOE	POC/APOE	Observation	POC/APOE	POC/APOE	POC/APOE	POC/APOE
Upgradient or downg	gradient	Upgradient/cross- gradient	Upgradient/cross- gradient	Upgradient/cross- gradient	Downgradient	Downgradient	Downgradient	Downgradient
Casing Diameter and	l Material	2" Sch 40 PVC	2" Sch 40 PVC	2" Sch 40 PVC	2" Sch 40 PVC	2" Sch 40 PVC	2" Sch 40 PVC	2.0" Sch 40 PVC
Screen Diameter and	l Material	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted	2.0" Sch 40 PVC slotted
Screen Slot Size (inc	hes)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Top of Casing Elevat	tion (feet AMSL)	635.99	636.89	644.15	631.93	633.42	633.51	637.50
Grade or Surface Ele	evation (feet AMSL)	633.66	633.29	644.32	628.34	629.89	629.39	634.33
Well Depth (feet BGS	5)	13.0	13.0	19.5	15.0	15.0	14.5	15.0
Well Depth (feet BTO	OC)	15.3	16.6	19.3	18.6	18.5	18.6	18.2
	From (feet BGS)	3.0	3.0	4.5	5.0	5.0	4.5	5.0
Screened Interval	To (feet BGS)	13.0	13.0	19.5	15.0	15.0	14.5	15.0
Screened interval	From (feet BTOC)	5.3	6.6	4.3	8.6	8.5	8.6	8.2
	To (feet BTOC)	15.3	16.6	19.3	18.6	18.5	18.6	18.2
Facility Coordinates	Northing (feet)	7,102,518.90	7,102,440.57	7,102,124.84	7,101,865.00	7,101,675.23	7,101,741.68	7,101,659.80
racinty Coordinates	Easting (feet)	2,480,490.82	2,480,046.67	2,480,769.44	2,479,876.33	2,480,260.29	2,480,041.87	2,480,549.86

Notes:

GWBU - groundwater-bearing unit

AMSL - above mean sea level BGS - below ground surface

BTOC - below top of casing PVC - polyvinyl chloride

APOE - Alternate Point of Exposure for Corrective Action Monitoring

POC - Point of Compliance for Corrective Action Monitoring

Well construction information was compiled from 1) Table 5D of the Affected Property Assessment Report for the Exide Frisco Recycling Facility prepared by Golder Associates and dated May 2014, 2) well construction logs and survey information included in the Affected Property Assessment Report prepared by Pastor, Behling & Wheeler and dated 2013, and 3) well construction logs and survey information included in the Deep Groundwater Preliminary Design Investigation Report prepared by Golder and included as Appendix 3.1 to Attachment M to the Part B of this RCRA Permit Renewal Application.

Entered by GS, BEF Updated by EPW Checked by EPW, BEF Reviewed by TR, AMF



Table VI.B.3.c-1: Groundwater Detection Monitoring Parameters

Unit/Waste Management Area: North Corrective Action Management Unit (North CAMU)

Well Numbers: PMW-19R, MW-41, MW-45, LMW-8, LMW-9R, LMW-5, LMW-17, PMW-20R, LMW-21, and LMW-22

					Concentration Limit (mg/L)	
Parameter	Sampling Frequency	Analytical Method	Unadjusted MQL (mg/L)	TRRP Tier 1 Residential <sup>GW</sup> GW <sub>Ing</sub> PCL	TRRP Tier 1 Commercial/Industri al <sup>GW</sup> GW <sub>Ing</sub> PCL	<sup>SW</sup> GW PCL
Arsenic (total and dissolved)	Ougate the (2	SW-6010B/6020A	0.003	0.01	0.010	0.34 (dissolved)
Cadmium (total and dissolved)	Quarterly (2 years)/Semiannually (after 2 years)	SW-6010B/6020A	0.000500	0.005	0.0050	0.00908 (dissolved)
Lead (total and dissolved)		SW-6010B/6020A	0.00250	0.015	0.015	0.0688 (dissolved)
Selenium (total and dissolved)	(alter 2 years)	SW-6010B/6020A	0.00250	0.050	0.050	0.02 (total)
Antimony (total and dissolved)		SW-6010B/6020A	0.00500	0.0060	0.0060	1.33
Barium (total and dissolved)		SW-6010B/6020A	0.00500	2.0	2.0	16
Chromium (total and dissolved)		SW-6010B/6020A	0.00500	0.10	0.10	0.598
Copper (total and dissolved)	Annually	SW-6010B/6020A	0.00500	1.3	1.3	0.015
Mercury (total and dissolved)		SW-7470A	0.000200	0.0020	0.0020	0.0024
Silver (total and dissolved)		SW-6010B/6020A	0.00100	0.12	0.37	0.0008
Zinc (total and dissolved)		SW-6010B/6020A	0.0200	7.3	22	0.123

### Notes:

mg/L - milligrams per liter

MQL - method quantitation limit

TRRP - Texas Risk Reduction Program

PCL - protective concentration limit

TRRP PCLs are obtained from the April 2018 Tier 1 PCL and supporting tables accessed at http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html.

The <sup>SW</sup>GW PCLs were approved in the Revised Class 2 Landfill Groundwater Monitoring Plan by Pastor, Behling & Wheeler and dated July 31, 2013, and approved by TCEQ in a letter dated April 4, 2014. As described in that report, "TRRP Rules §350.37(i) and §350.51(f) indicate that the <sup>SW</sup>GW PCL applies for monitoring wells in locations where there is a potential point of discharge of groundwater to surface water (e.g., down-gradient wells LMW-5, LMW-17 and LMW-22 and cross-gradient well LMW-8). Per TRRP-24, specific aquatic life criteria apply to dissolved rather than total concentrations since the dissolved phase represents the bioavailable form. SWGW PCLs were conservatively set to SWSW RBELs (i.e.,no dilution factor). SWSW RBELs are based on acute ecological criteria for Stewart Creek and the North Tributary (intermittent streams), except those for barium and antimony, which are based on chronic ecological criteria because acute criteria are not established for these constituents. Per TRRP-24, RBELs for cadmium, copper, lead and zinc were adjusted based on a hardness value of 106 mg/L for Lake Lewisville, Segment 0823."

Entered by BEF Checked by GS Reviewed by TR, AMF



### Table VI.B.3.c-2: Groundwater Corrective Action Monitoring Parameters

Unit/Waste Management Area: Former Operating Plant (excluding the North CAMU)

Well Numbers: B3R, B4R, B7N, B9N, DGW-MW-9, MW-10, MW-17, MW-18, MW-21, MW-22, MW-23, MW-26, MW-27, MW-29, MW-44

						Concentration Limit (mg/L)		
Parameter	Sampling Frequency	Analytical Method	Unadjusted MQL (mg/L)	TRRP Tier 1 Residential <sup>GW</sup> GW <sub>Ing</sub> PCL	TRRP Tier 1 Commercial/ Industrial <sup>GW</sup> GW <sub>ing</sub> PCL		<sup>SW</sup> GW PCL (based on acute aquatic life criteria) <sup>1,2</sup>	
Antimony (total and dissolved)		SW-6010B/6020A	0.00500	0.006	0.006	14.7 (total)	6.60 (total)	1.33
Arsenic (total and dissolved)	Quarterly (2	SW-6010B/6020A	0.00300	0.01	0.01	1.00 (dissolved)	0.34 (dissolved)	0.19
Cadmium (total and dissolved)	years)/Semiannually	SW-6010B/6020A	0.000500	0.005	0.005	0.0017 (dissolved)	0.00908 (dissolved)	0.99
Lead (total and dissolved)	(after 2 years)	SW-6010B/6020A	0.00250	0.015	0.015	0.0179 (dissolved)	0.0688 (dissolved)	0.10
Selenium (total and dissolved)		SW-6010B/6020A	0.00250	0.050	0.050	0.0333 (total)	0.02 (total)	27.5

Notes:

mg/L - milligrams per liter

MQL - method quantitation limit

TRRP - Texas Risk Reduction Program

PCL - protective concentration level

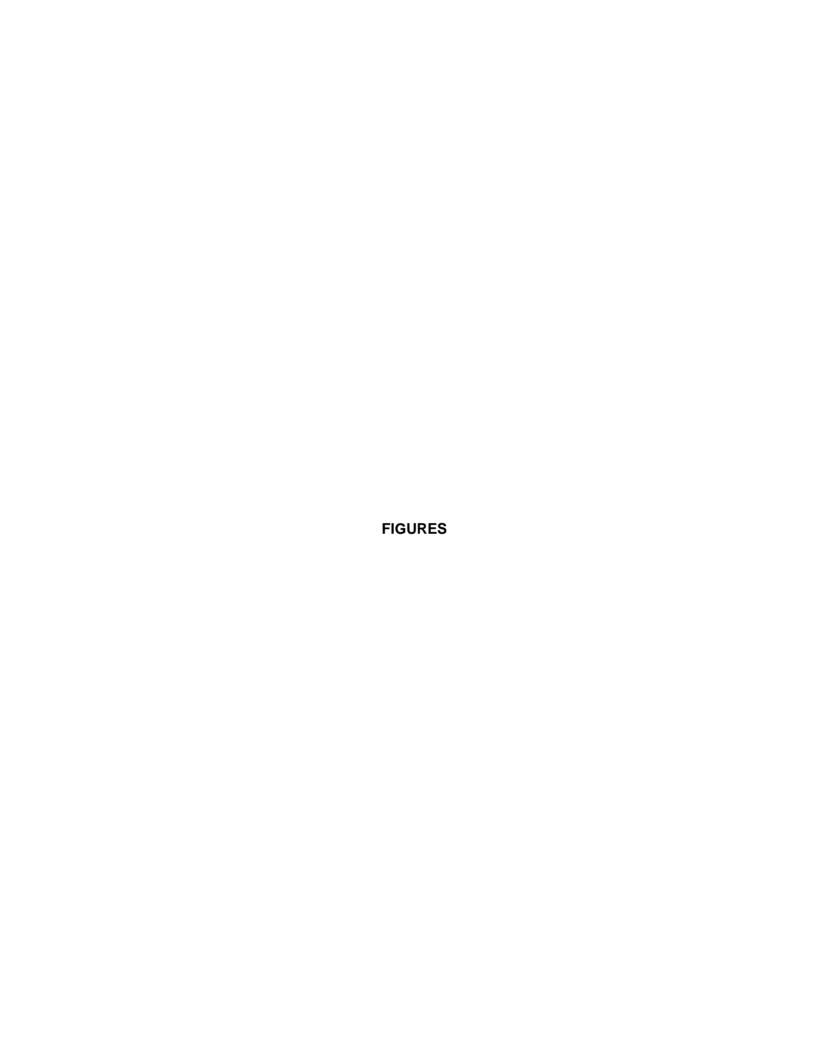
TRRP PCLs are copied from the April 2018 Tier 1 PCL and supporting tables accessed at http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html.

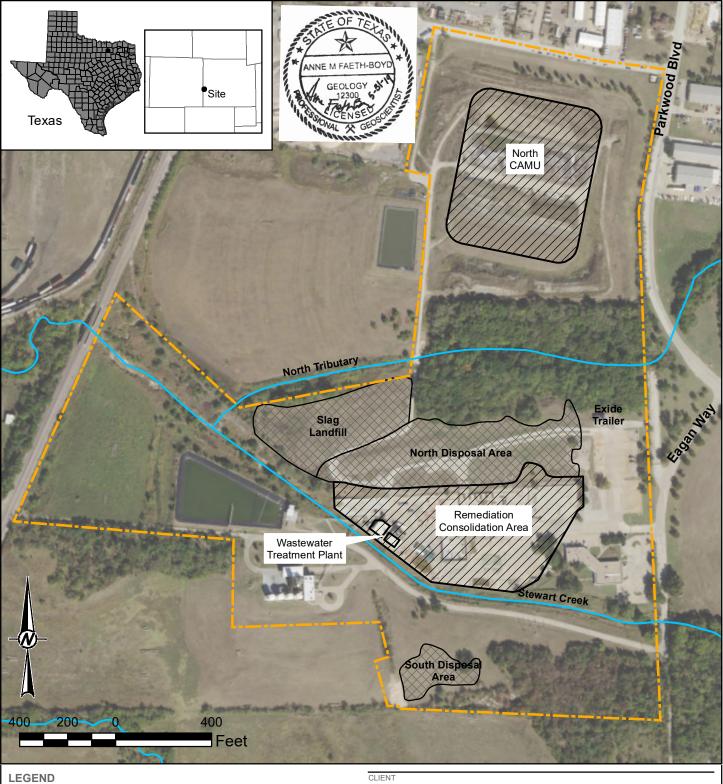
(1) The antimony, arsenic, and selenium SWGW PCLs are set to the TCEQ's aquatic life surface water benchmarks, updated in August 2018. The cadmium and lead swGW PCLs are set to the SWSW risk-based exposure limits (RBELs) as approved in the 2014 Affected Property Assessment Report. Per TRRP-24, the swGW PCLs apply to monitoring wells where there is a potential point of discharge of groundwater to surface water (i.e., in the near vicinity of Stewart Creek or the North Tributary). Chronic ecological criteria apply to monitoring wells along Stewart Creek (a perennial stream) assuming a 0.15 dilution factor (MW-17, MW-26, MW-27, MW-29, and MW-44). Acute ecological criteria apply to wells B9N and MW-18 along the North Tributary (an intermittent stream).

(2) Per TRRP-24, specific aquatic life criteria for arsenic, cadmium and lead apply to dissolved rather than total concentrations since the dissolved phase represents the bioavailable form. Also per TRRP-24, the monitoring wells where there is a potential to discharge to surface water. Arsenic, cadmium, and lead RBELs based on hardness value of 106 mg/L for Segment 0823.

Entered by GS, BEF Updated by EPW Checked by EPW, BEF Reviewed by TR, AMF







Creek Centerline

Existing Building

Corrective Action Management Unit

Disposal Area

Approximate RCRA Permitted Boundary

### **REFERENCE**

1. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

**EXIDE TECHNOLOGIES** 

PROJECT

RCRA PERMIT RENEWAL

TITLE

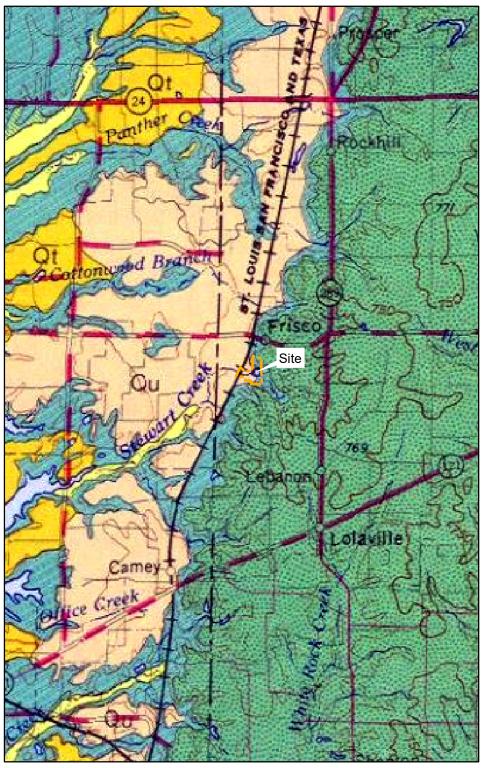
CONSULTANT

ONSITE PROPERTY MAP

\$	G	0	L	D	Ε	R
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YYYY-MM-DD	2019-05-28
PREPARED	EFT
DESIGN	JWT
REVIEW	EPW
APPROVED	AMF

PROJECT No. CONTROL Rev. FIGURE 13-02086-06 1302086ZF014.mxd 0 VI.A-1





# Qal Qt Alluvium (Qal), fluviatile terrace deposits (Qt), surficial deposits undivided (Qu) Kau

Austin Group

Eagle Ford Formation

Woodbine Formation

Upper Cretaceous

**EXPLANATION** 

**LEGEND** 

Approximate RCRA Permitted Boundary



### **REFERENCE**

1. BASEMAP - GEOLOGIC ATLAS OF TEXAS, SHERMAN SHEET (MCGOWEN ET AL., 1991

CLIENT

**EXIDE TECHNOLOGIES** 

PROJECT

RCRA PERMIT RENEWAL

TITLE

CONSULTANT

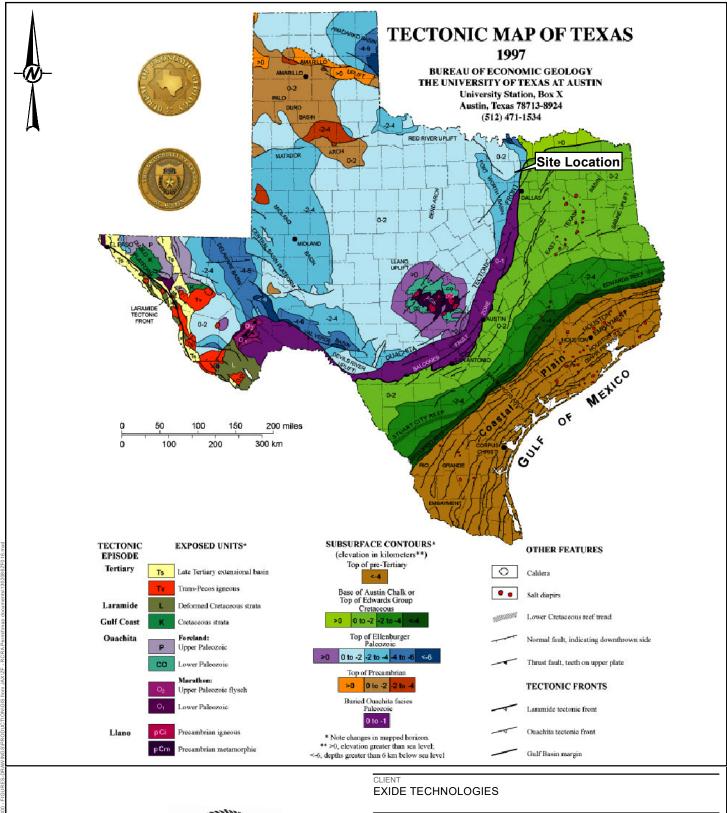
REGIONAL GEOLOGIC MAP

GOLDER

YYYY-MM-DD	2019-05-30
PREPARED	JWT
DESIGN	JWT
REVIEW	GS
APPROVED	AMF

 PROJECT No.
 CONTROL
 Rev.
 FIGURE

 13-02086
 1302086ZF015.mxd
 0
 VI.A-2





### **REFERENCE**

1. BASEMAP - BUREAU OF ECONOMIC GEOLOGY, THE UNIVERSITY OF TEXAS AT AUSTIN, 1997 -

HTTPS://WWW.LIB.UTEXAS.EDU/GEO/PICS/TECTONIC2.JPG

PROJECT

### RCRA PERMIT RENEWAL

TITLE

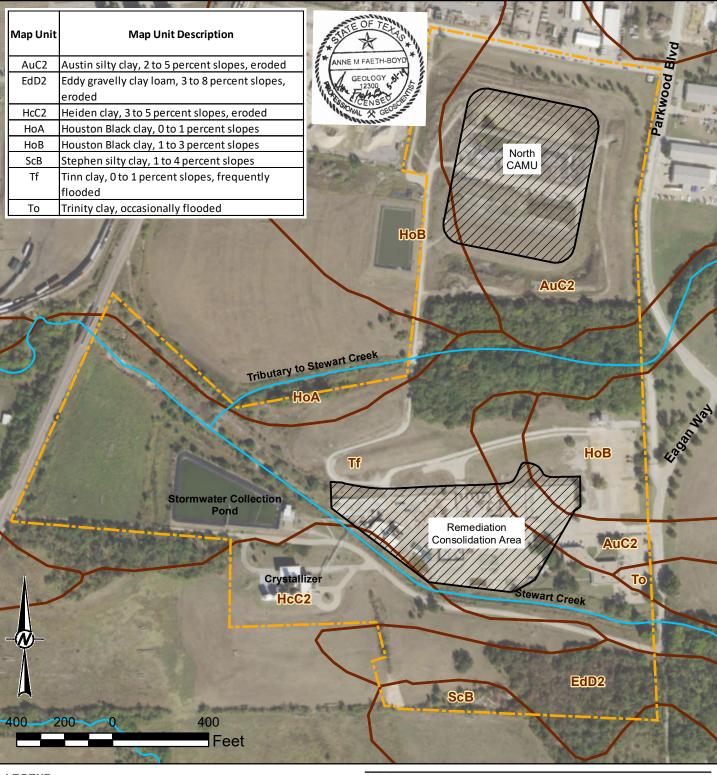
CONSULTANT

### **TECTONIC MAP OF TEXAS**

**G** GOLDER

YYYY-MM-DD	2019-05-02
PREPARED	JWT
DESIGN	JWT
REVIEW	GS
APPROVED.	AME

PROJECT No. CONTROL Rev. FIGURE 13-02086 1302086ZF016.mxd 0 VI.A-3





Creek Centerline

Corrective Action Management Unit



Approximate RCRA Permitted Boundary

### REFERENCE

1. AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY.

2. SOIL DATA - UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) NATURAL RESOURCES CONSERVATION SERVICE ONLINE WEB SOIL SURVEY, 2016.

CLIENT EXIDE TECHNOLOGIES

PROJECT

CONSULTANT

RCRA PERMIT RENEWAL

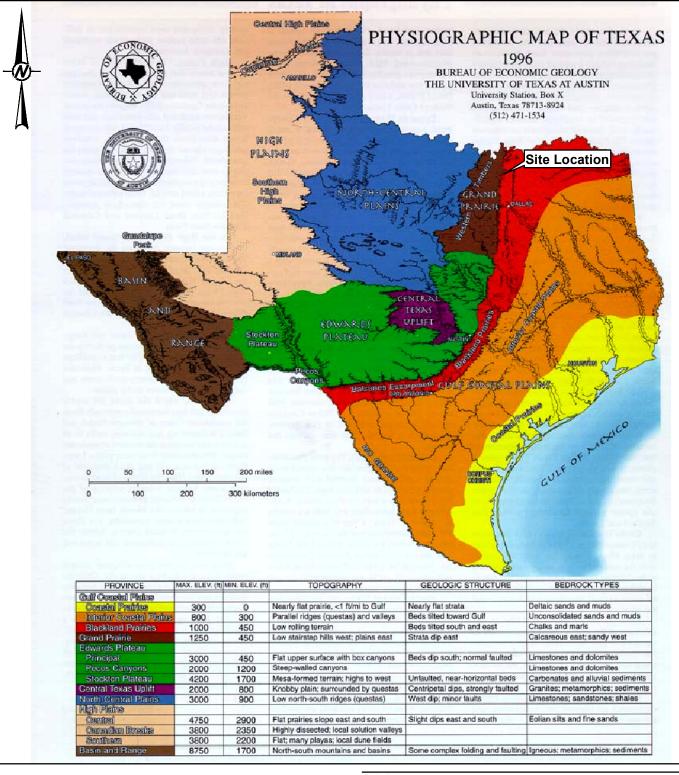
TITLE

### **ONSITE SOILS MAP**

\$	G	0	L	D	Ε	R	
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YYYY-MM-DD	2019-05-30
PREPARED	EFT
DESIGN	JWT
REVIEW	EPW
APPROVED	AMF

PROJECT No. CONTROL Rev. FIGURE 13-02086-06 1302086ZF017.mxd 0 VI.A-4





### **REFERENCE**

1. BASEMAP - BUREAU OF ECONOMIC GEOLOGY, THE UNIVERSITY OF TEXAS AT AUSTIN, 1997 -

HTTPS://WWW.LIB.UTEXAS.EDU/GEO/PICS/TXPHYSIO.JPG

CLIENT

**EXIDE TECHNOLOGIES** 

PROJECT

RCRA PERMIT RENEWAL

TITLE

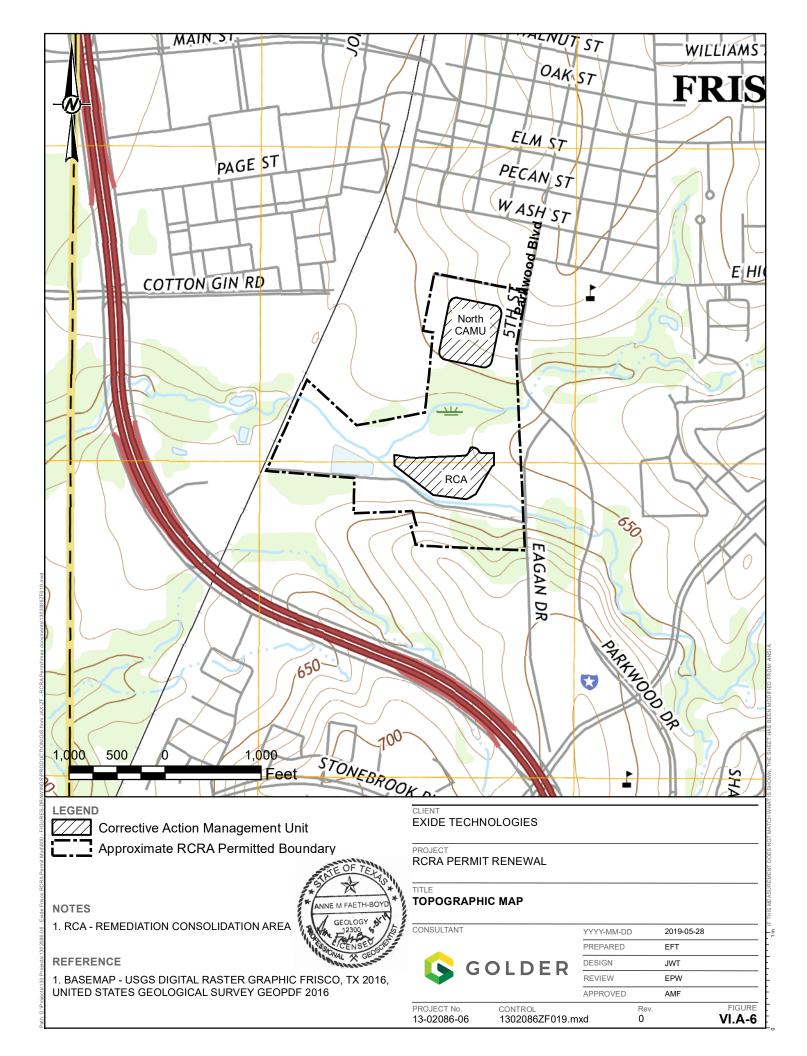
CONSULTANT

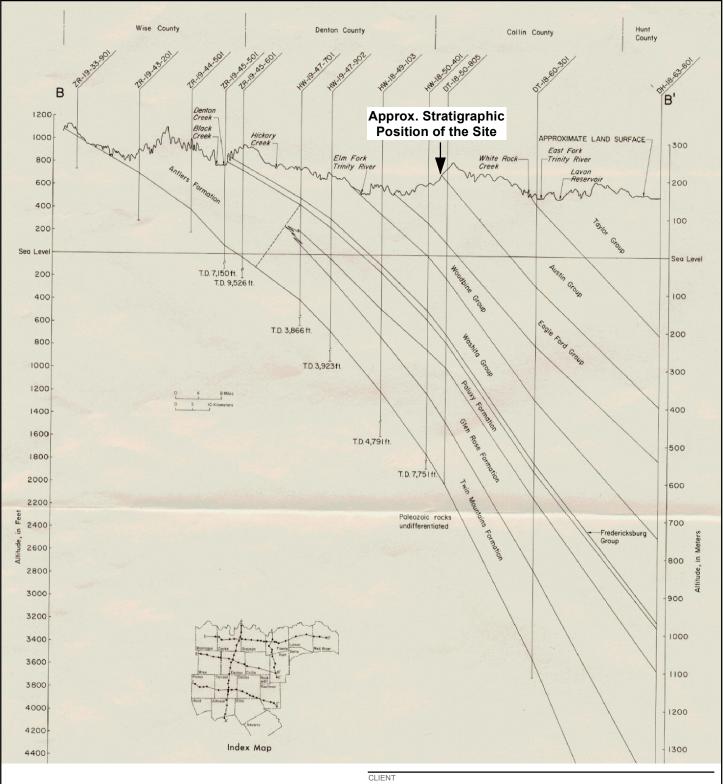
### PHYSIOGRAPHIC MAP OF TEXAS

GOLDER

YYYY-MM-DD	2019-05-02	
PREPARED	JWT	
DESIGN	JWT	
REVIEW	GS	
APPROVED	AMF	

PROJECT №. CONTROL Rev. FIGURE 13-02086 1302086ZF018.mxd 0 VI.A-5







### **REFERENCE**

1. AFTER NORDSTROM (1982) - APAR 2013, PASTOR, BEHLING & WHEELER, LLC

**EXIDE TECHNOLOGIES** 

PROJECT

RCRA PERMIT RENEWAL

TITLE

CONSULTANT

### REGIONAL GEOLOGIC CROSS SECTION MAP

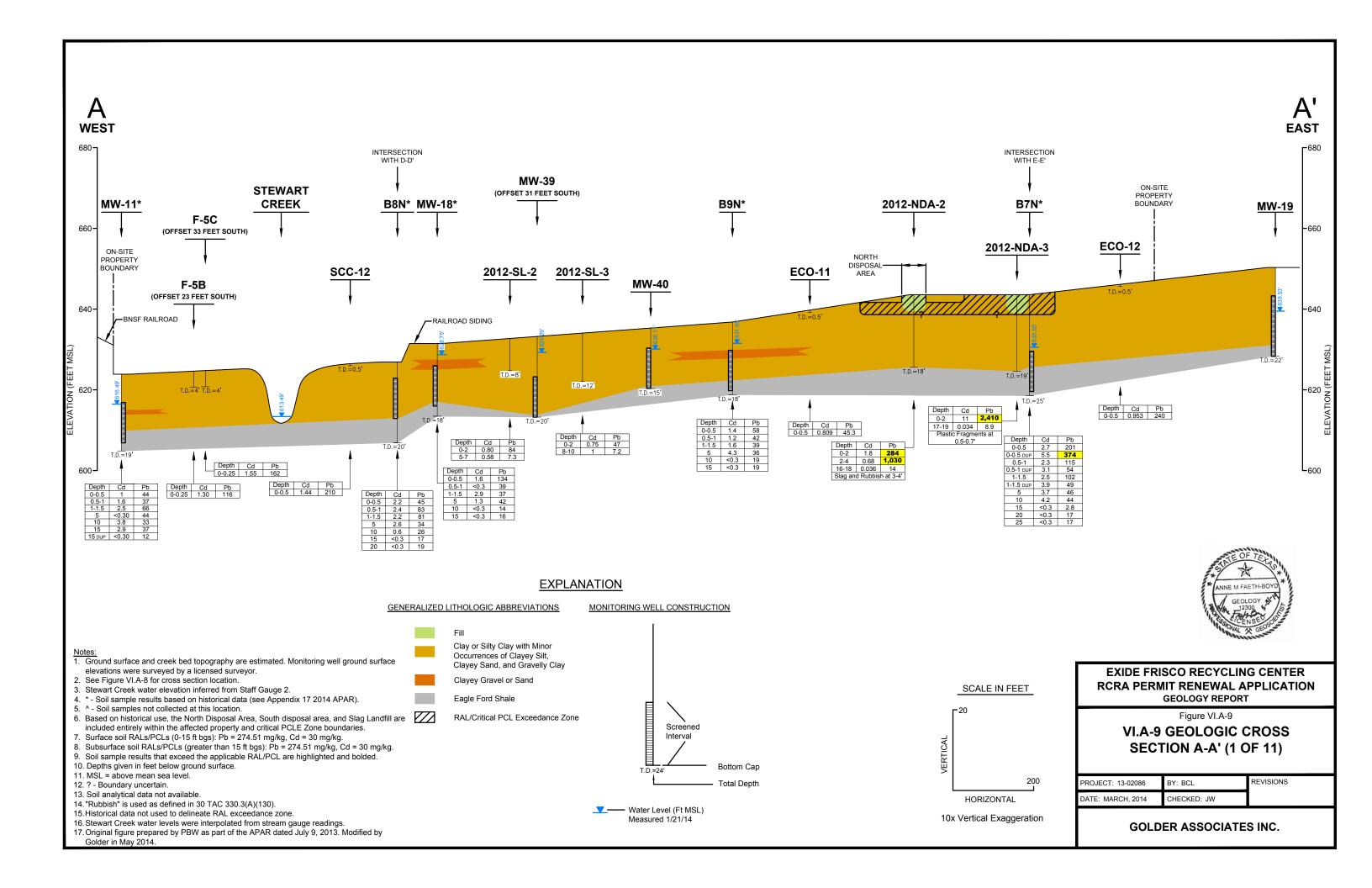
GOLDER

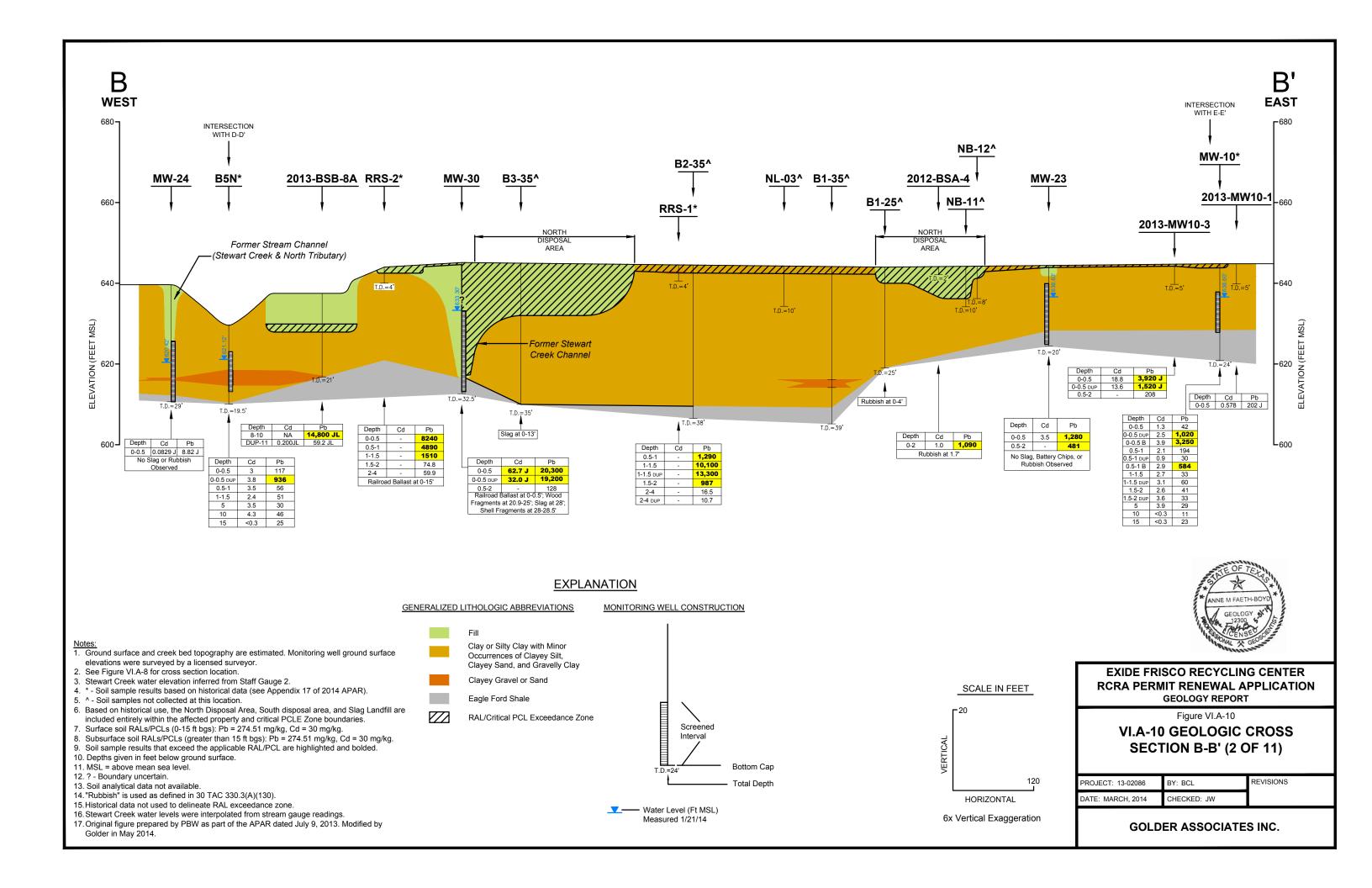
YYYY-MM-DD	2019-05-02
PREPARED	JWT
DESIGN	JWT
REVIEW	GS
APPROVED	AMF

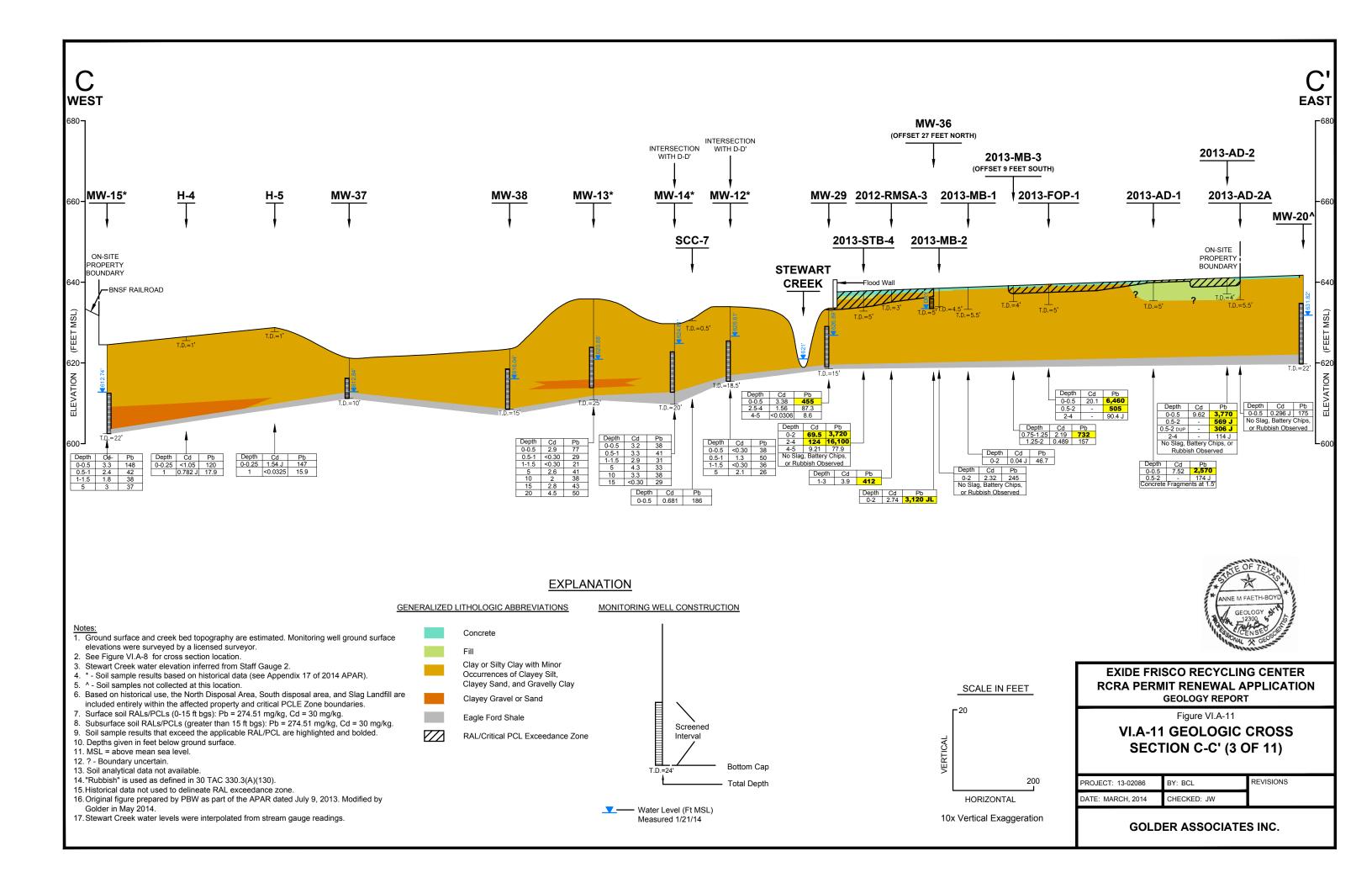
 PROJECT No.
 CONTROL
 Rev.
 FIGURE

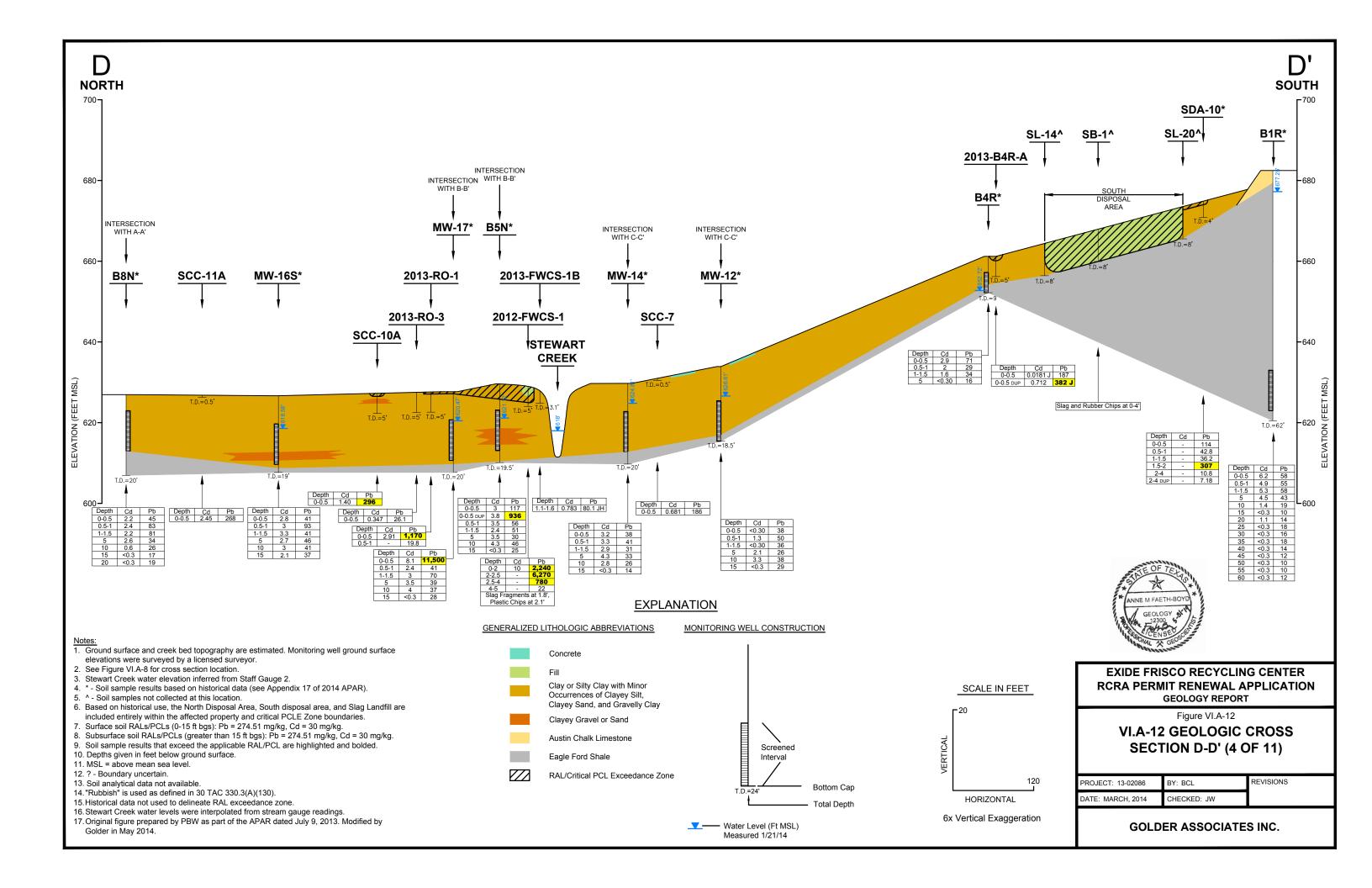
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 VI.A-7

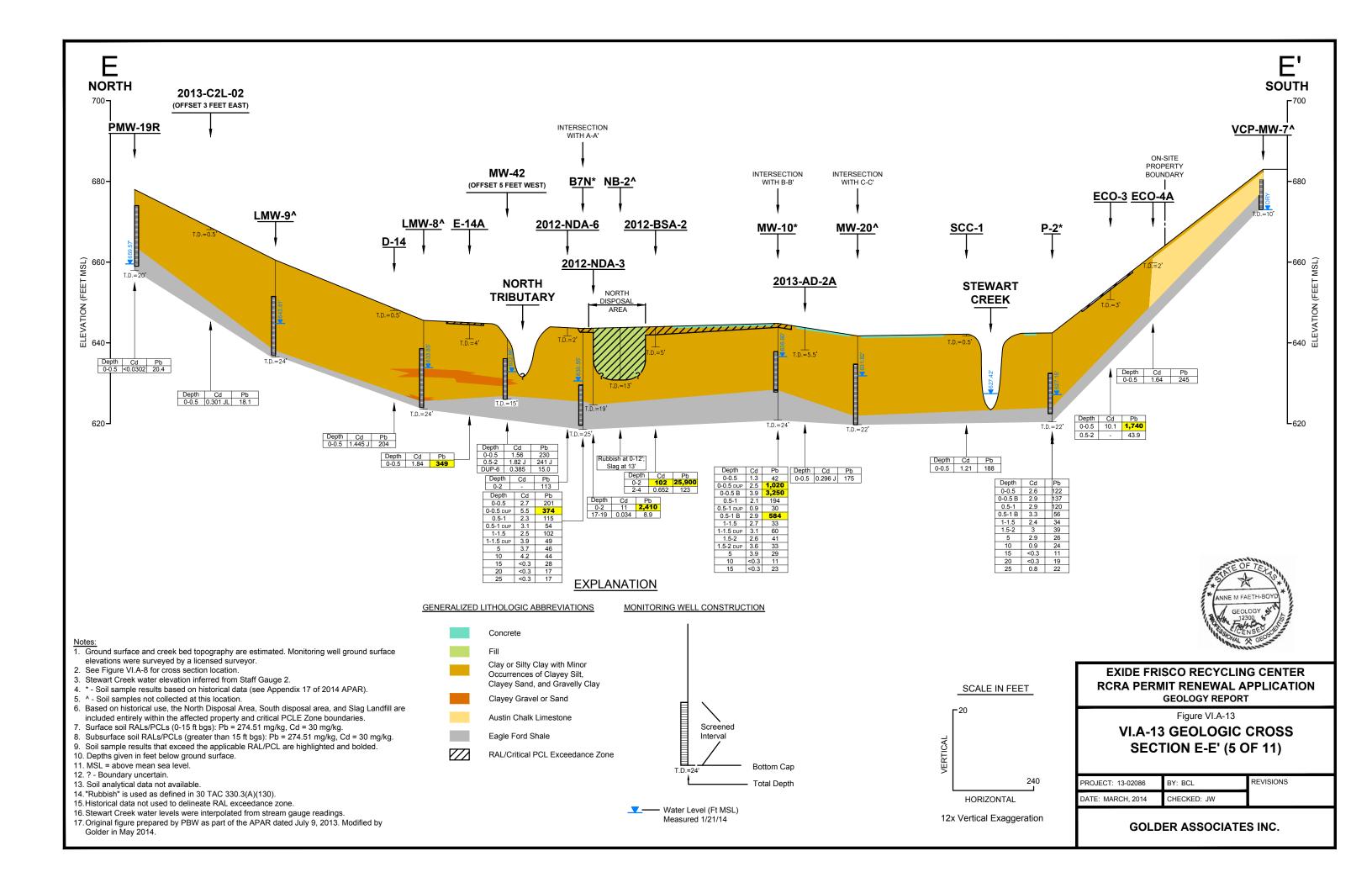


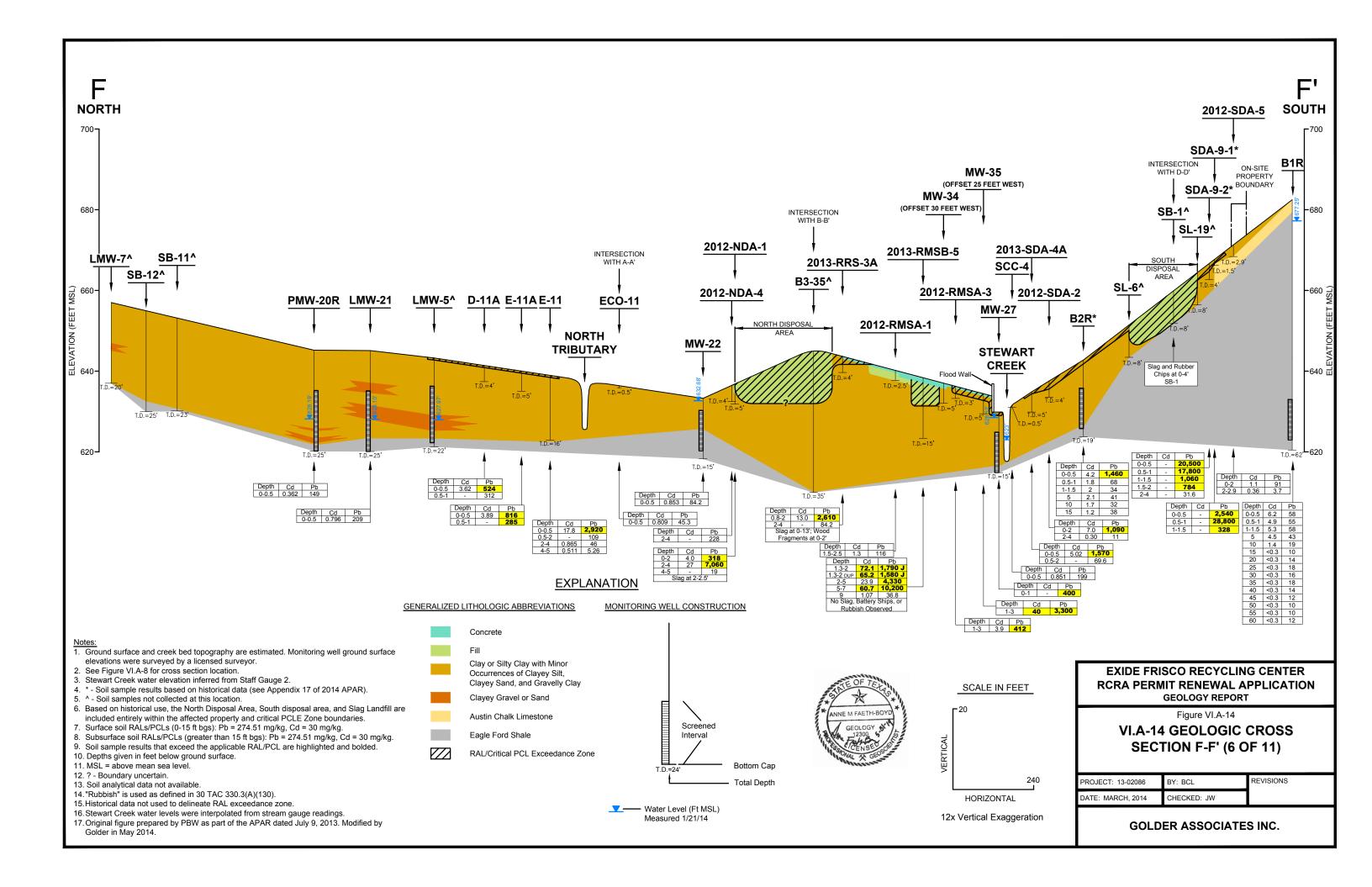


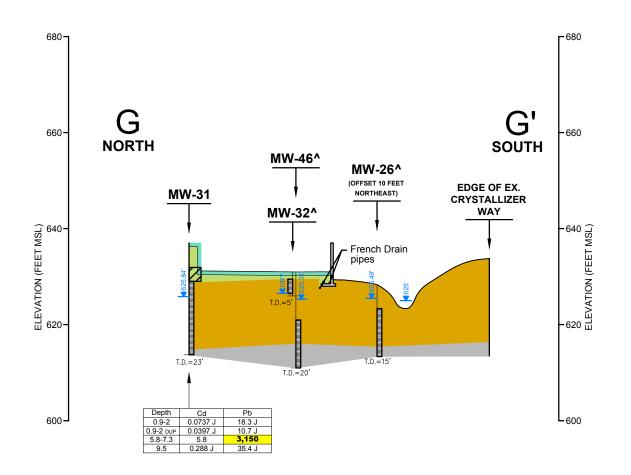






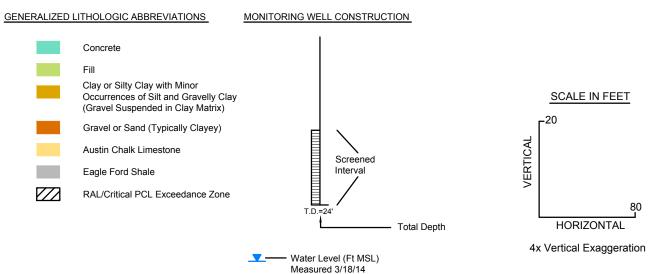






# **EXPLANATION**

- 1. Ground surface and creek bed topography are estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
- 2. See Figure VI.A-8 for cross section locations.
- 3. Ground surface elevations and creek bed topography are estimated. Monitoring well elevations were surveyed by a professional surveyor.
- 4. ^ Soil samples not collected at this location.
- 5. Surface soil RALs/PCLs (0-15 ft bgs): Pb = 274.51 mg/kg, Cd = 30 mg/kg.
- 6. Subsurface soil RALs/PCLs (greater than 15 ft bgs): Pb = 274.51 mg/kg, Cd = 30
- 7. Soil sample results that exceed the applicable RAL/PCL are highlighted and bolded.
- 8. Depths given in feet below ground surface.
- 9. Surface water elevations in Stewart Creek inferred from staff gauge elevations measured 1/21/2014. The staff gauge was observed to be damaged from from flooding prior to the 3/18/2014 site visit.
- 10. Approximately 0.4 feet of water was observed in the end cap of MW-32. However, water was not observed within the screened interval of the well.
- 11. MSL Above mean sea level.
- 12.NS Not selected for use.
- 13. Stewart Creek water levels were interpolated from stream gauge readings.





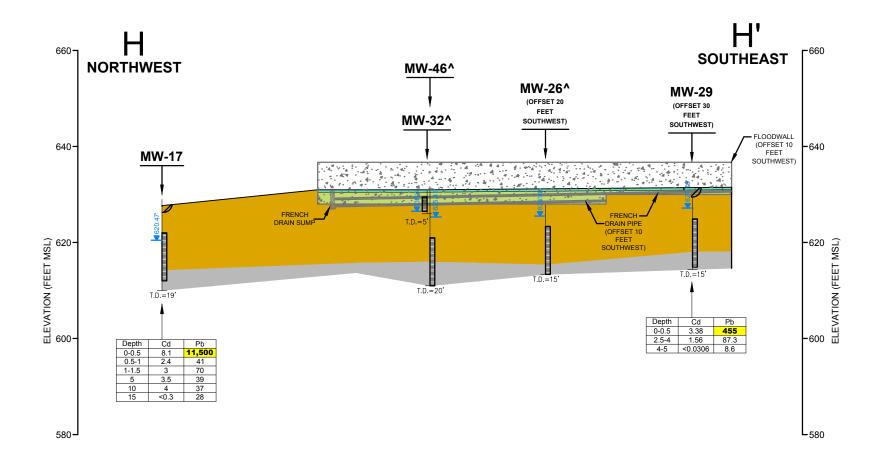
**EXIDE FRISCO RECYCLING CENTER** RCRA PERMIT RENEWAL APPLICATION **GEOLOGY REPORT** 

Figure VI.A-15

**VI.A-15 GEOLOGIC CROSS SECTION G-G' (7 OF 11)** 

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

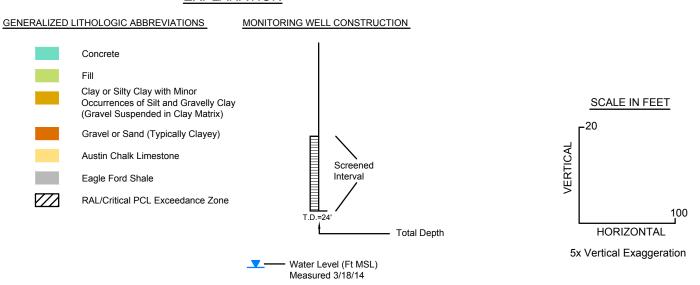
**GOLDER ASSOCIATES INC.** 



### Notes

- 1. Ground surface and creek bed topography are estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
- 2. See Figure VI.A-8 for cross section locations.
- 3. Ground surface elevations and creek bed topography are estimated. Monitoring well elevations were surveyed by a professional surveyor.
- 4. ^ Soil samples not collected at this location.
- 5. Surface soil RALs/PCLs (0-15 ft bgs): Pb = 274.51 mg/kg, Cd = 30 mg/kg.
- Subsurface soil RALs/PCLs (greater than 15 ft bgs): Pb = 274.51 mg/kg, Cd = 30 mg/kg.
- 7. Soil sample results that exceed the applicable RAL/PCL are highlighted and bolded.
- 8. Depths given in feet below ground surface.
- Surface water elevations in Stewart Creek inferred from staff gauge elevations measured 1/21/2014. The staff gauge was observed to be damaged from from flooding prior to the 3/18/2014 site visit.
- 10. Approximately 0.4 feet of water was observed in the end cap of MW-32. However, water was not observed within the screened interval of the well.
- 11. MSL Above mean sea level.
- 12.NS Not selected for use.
- 13. Stewart Creek water levels were interpolated from stream gauge readings.
- 14. Fill depth along floodwall based on as-built drawings in the Wall Seepage Project Construction Report by W&M Environmental Group, Inc., dated May 10, 2013.

### **EXPLANATION**





EXIDE FRISCO RECYCLING CENTER
RCRA PERMIT RENEWAL APPLICATION
GEOLOGY REPORT

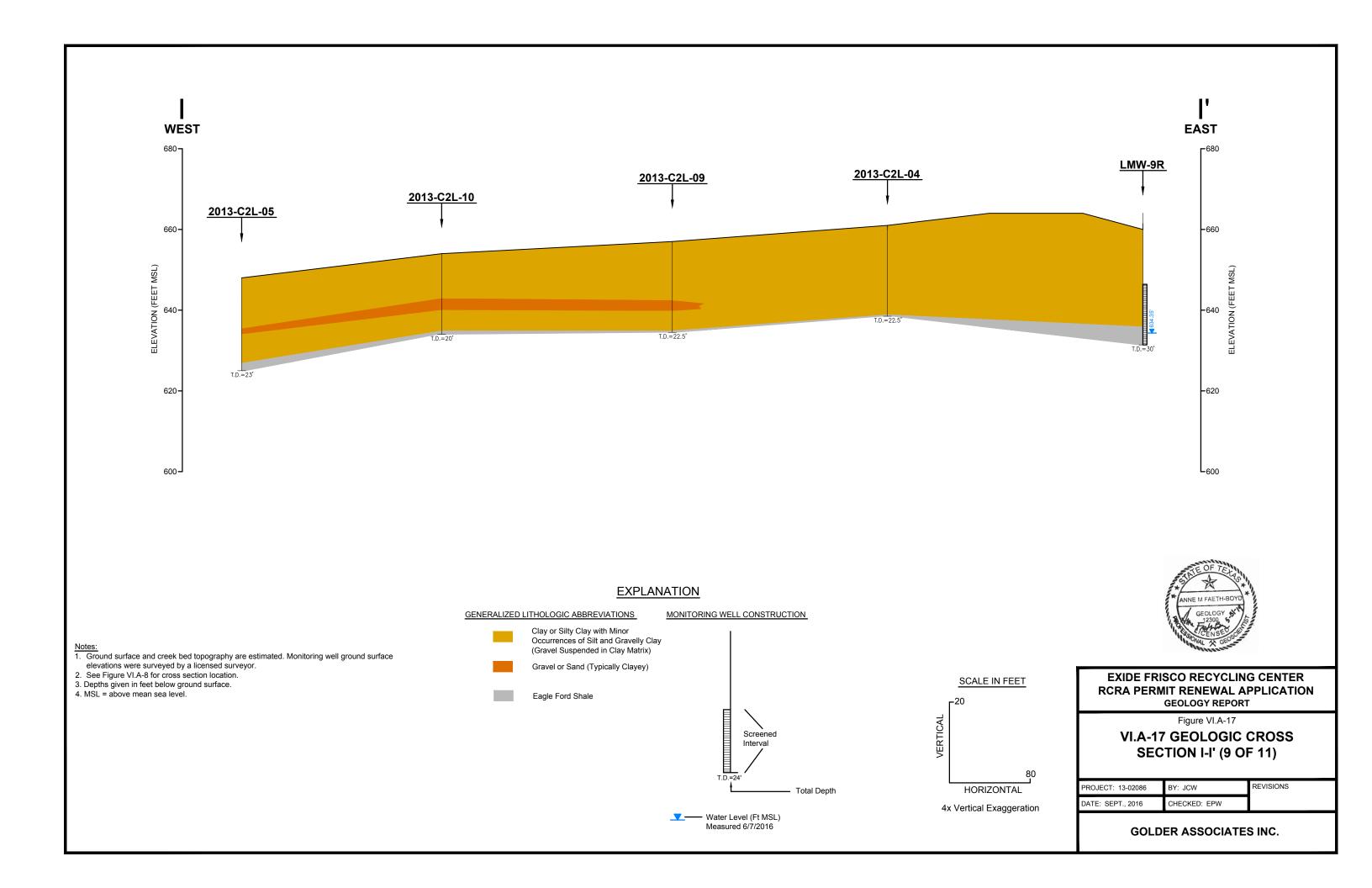
Figure VI.A-16

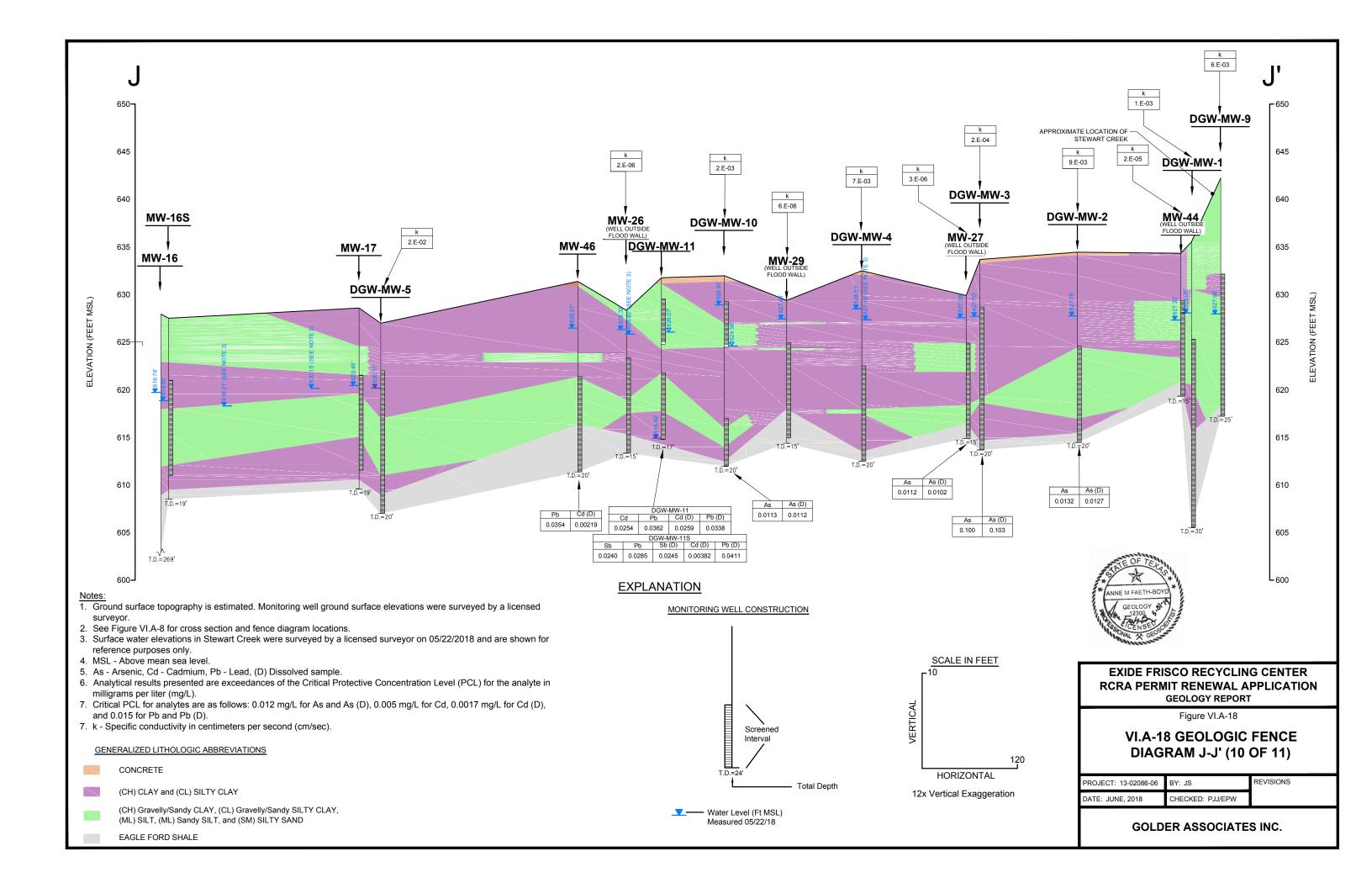
VI.A-16 GEOLOGIC CROSS SECTION H-H' (8 OF 11)

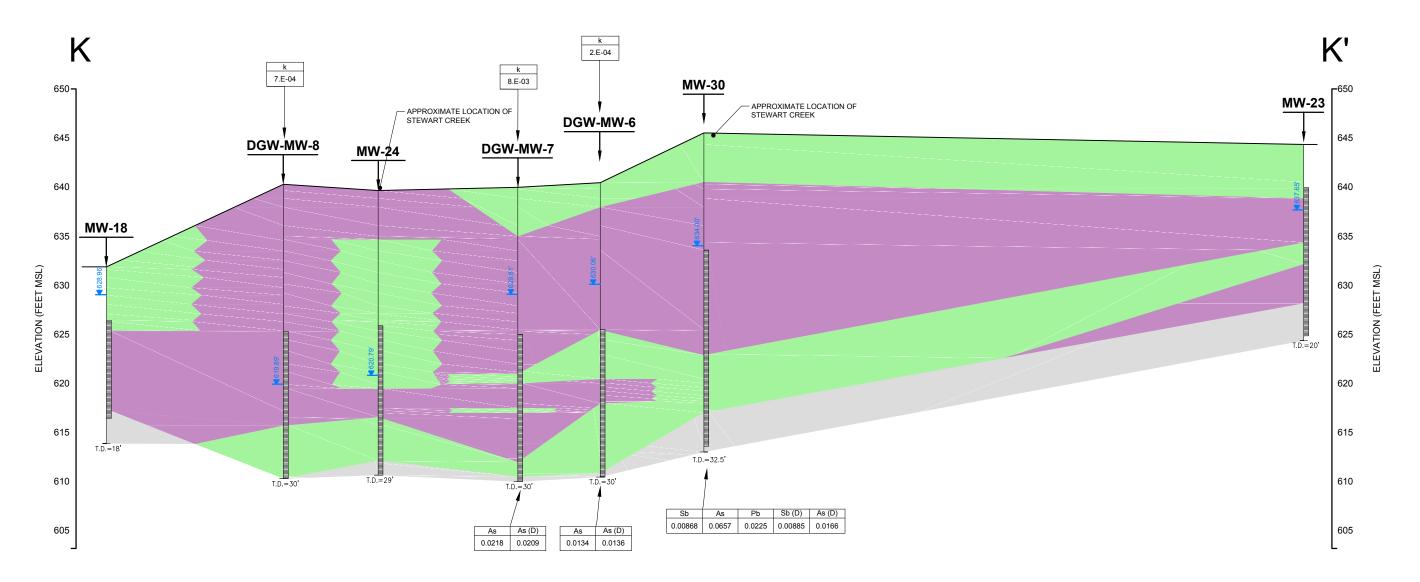
PROJECT: 13-02086 BY: BCL REVISIONS

DATE: MARCH, 2014 CHECKED: JW

**GOLDER ASSOCIATES INC.** 







### Notes

- 1. Ground surface topography is estimated. Monitoring well ground surface elevations were surveyed by a licensed surveyor.
- 2. See Figure VI.A-8 for cross section and fence diagram locations.
- 3. MSL Above mean sea level.
- 4. Sb Antimony, As Arsenic, Cd Cadmium, Pb Lead, (D) Dissolved sample.
- Analytical results presented are exceedances of the Critical Protective Concentration Level (PCL) for the analyte in milligrams per liter (mg/L).
- 6. Critical PCL for analytes are as follows: 0.012 mg/L for As and As (D), 0.005 mg/L for Cd, 0.0017 mg/L for Cd (D), 0.015 for Pb and Pb (D), and 0.006 mg/L for Sb and Sb (D).
- 7. k Specific conductivity in centimeters per second (cm/sec).

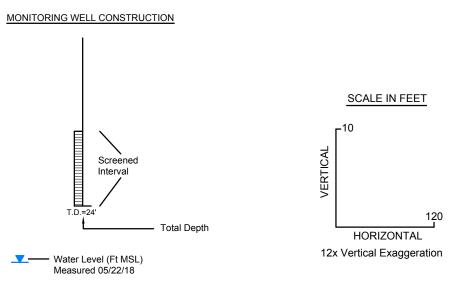
### GENERALIZED LITHOLOGIC ABBREVIATIONS

(CH) CLAY and (CL) SILTY CLAY

(CH) Gravelly/Sandy CLAY, (CL) Gravelly/Sandy SILTY CLAY, (ML) SILT, (ML) Sandy SILT, and (SM) SILTY SAND

EAGLE FORD SHALE

### **EXPLANATION**





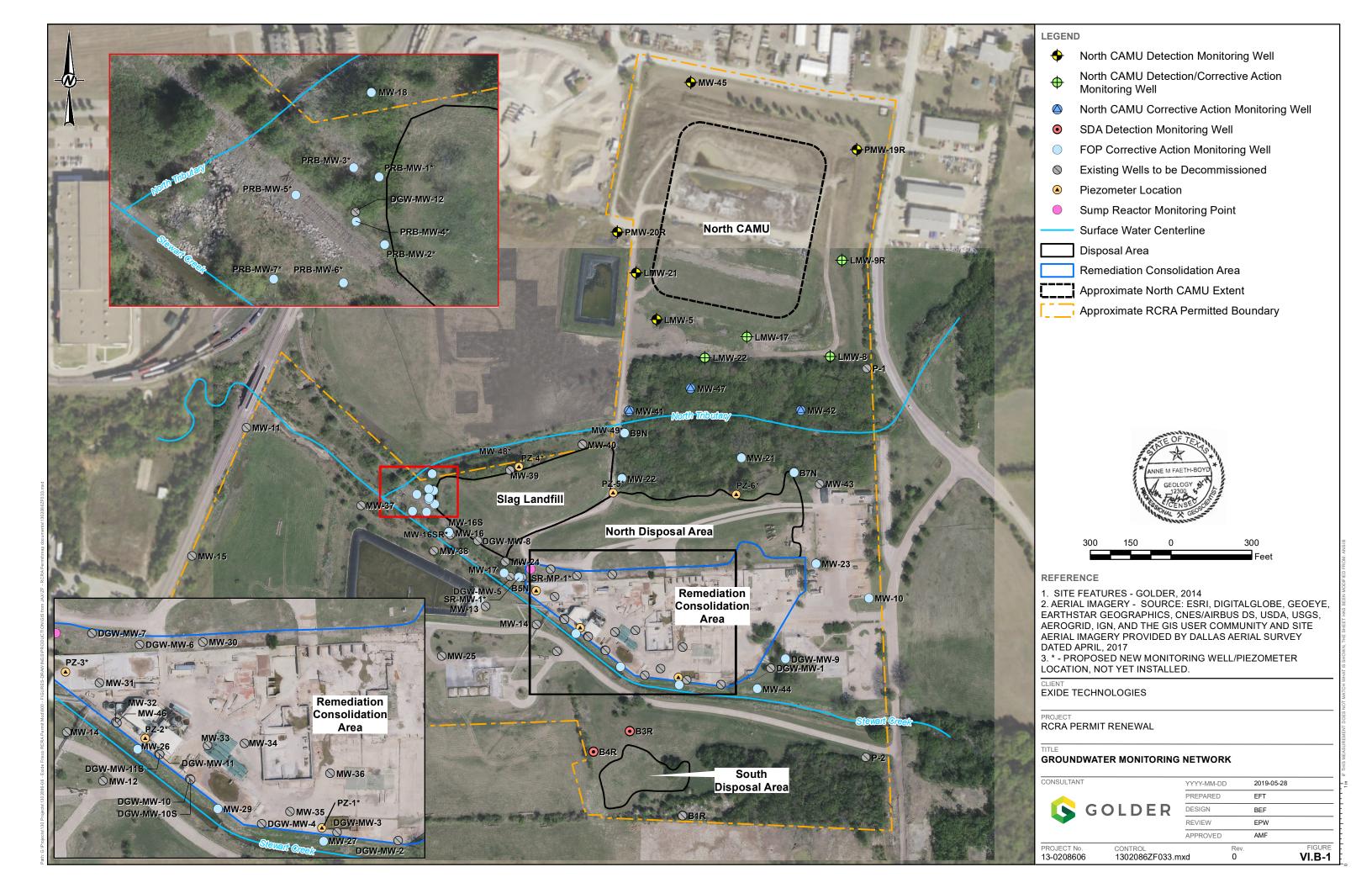
# EXIDE FRISCO RECYCLING CENTER RCRA PERMIT RENEWAL APPLICATION GEOLOGY REPORT

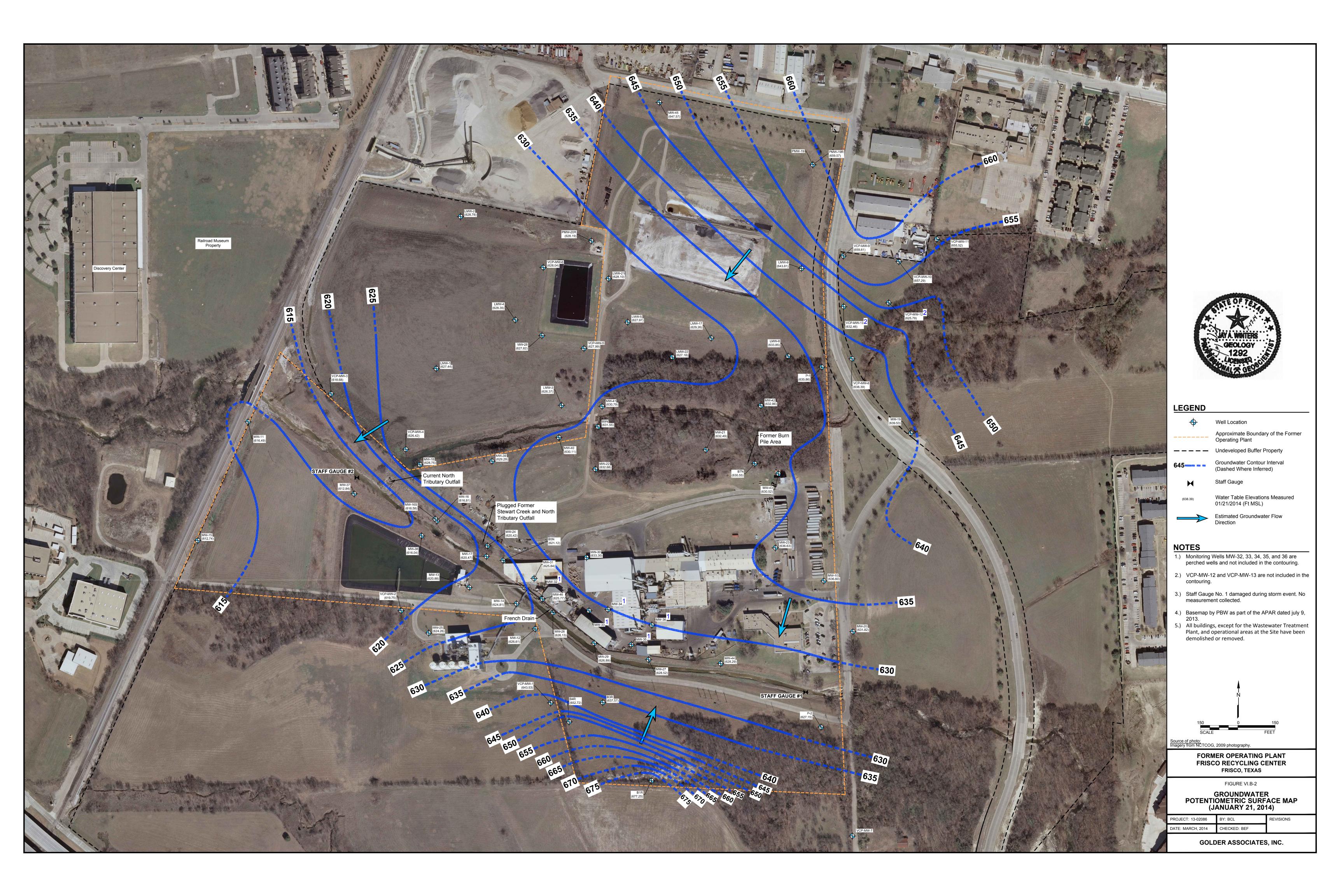
Figure VI.A-19

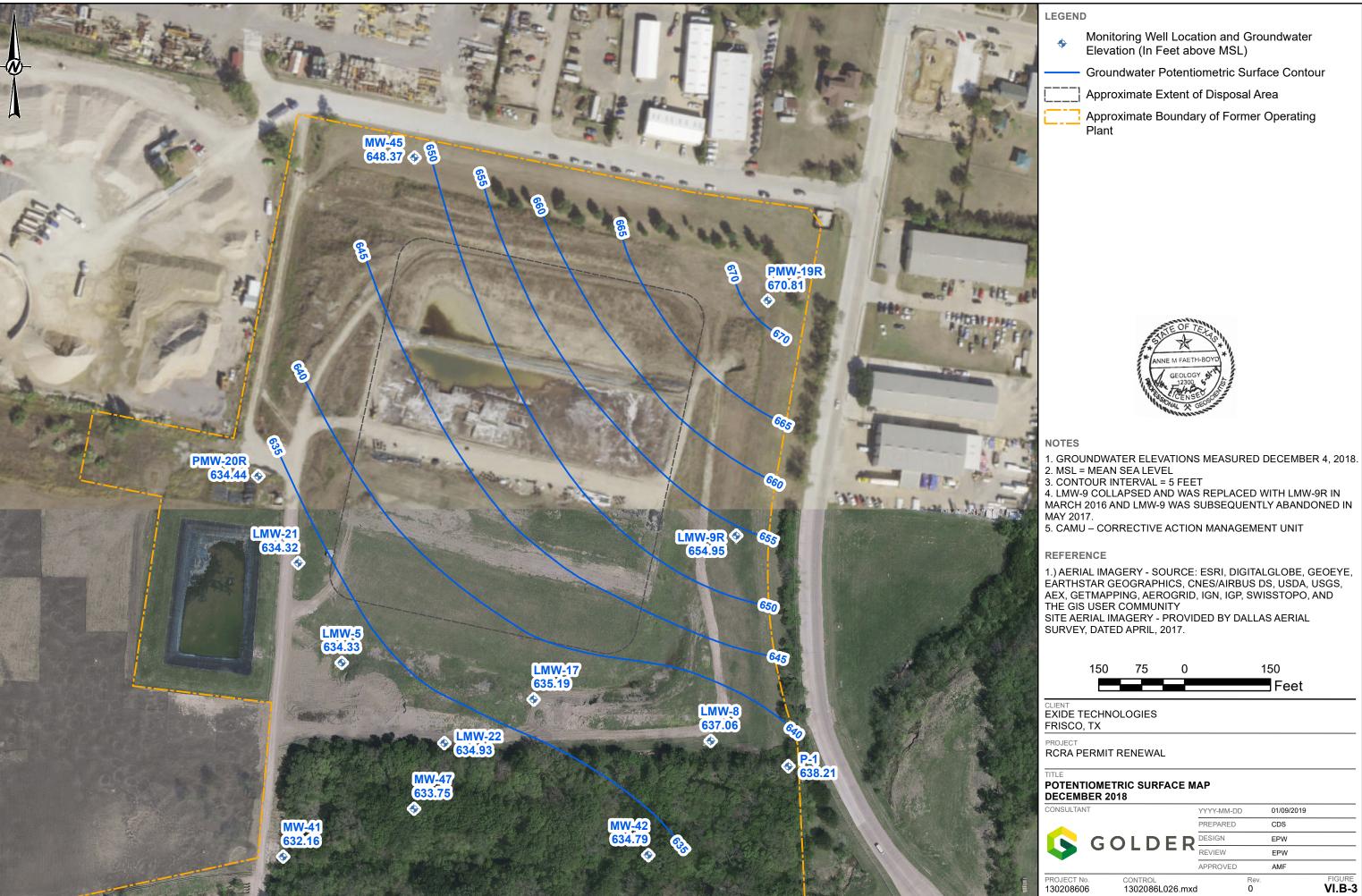
### VI.A-19 GEOLOGIC FENCE DIAGRAM K-K' (11 OF 11)

PROJECT: 13-02086-06	BY: JS	REVISIONS
DATE: JUNE, 2018	CHECKED: PJJ/EPW	

**GOLDER ASSOCIATES INC.** 







Groundwater Potentiometric Surface Contour

Approximate Extent of Disposal Area

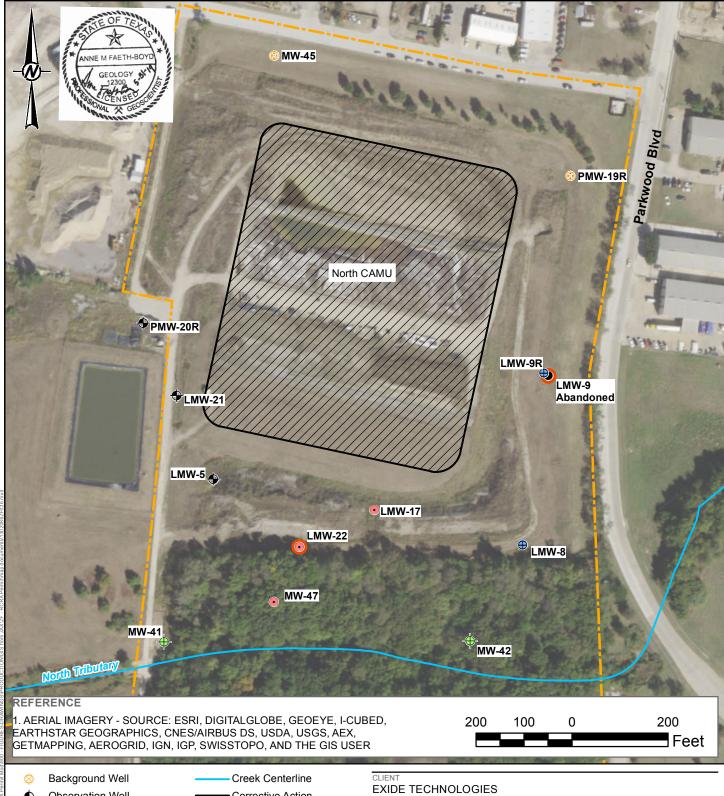
Approximate Boundary of Former Operating

1.) AERIAL IMAGERY - SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

150	75	0	150
			Feet

ANT	YYYY-MM-DD	01/09/2
	PREPARED	CDS
GOLDER	DESIGN	EPW
GOLDLK	REVIEW	EPW
	APPROVED	AMF

FIGURE VI.B-3



Observation Well

APOE Well

Attenuation Monitoring Point

Abandoned Well

APOE Well/POC

Permit Number: HW-50206 Solid Waste Registration Number: 30516

NOR Unit Number: 012

Unit Description: North Corrective Action Management Unit

1. APOE - ALTERNATE POINT OF EXPOSURE 2. BGS - BELOW GROUND SURFACE

3. AAL - ATTENUATION ACTION LEVEL POC - POINT OF COMPLIANCE

Corrective Action Management Unit

Approximate RCRA Permitted Boundary

> **Groundwater Protective** Concentration Level

Exceedance (PCLE) Zone (Metals)

# CONSULTANT

RCRA PERMIT RENEWAL

2019-05-28 YYYY-MM-DD PREPARED EPW DESIGN EPW REVIEW BEF APPROVED AMF

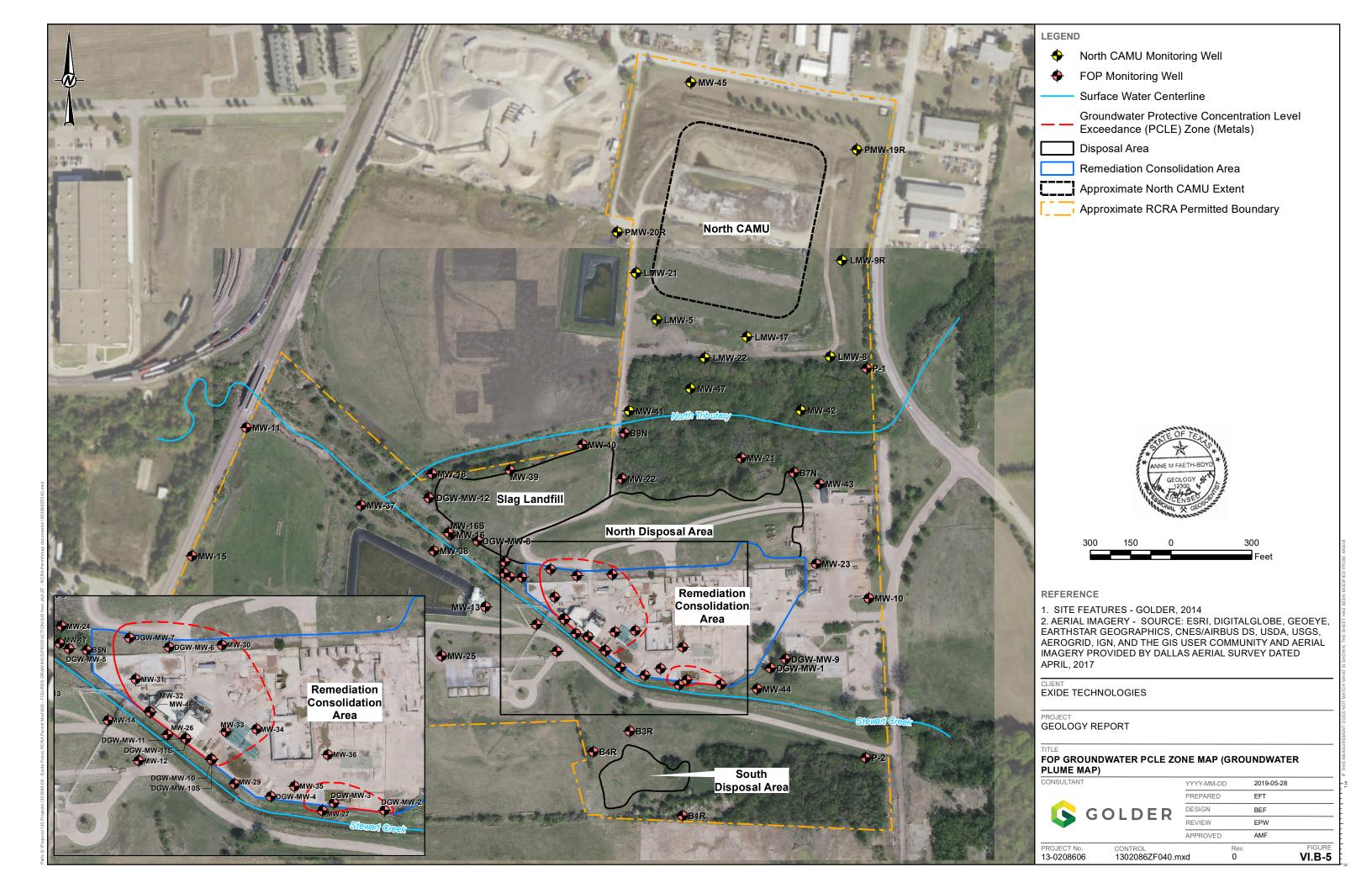
PROJECT No. 13-02086-06

CONTROL 1302086ZF036.mxd Rev. FIGURE VI.B-4

PROJECT

NORTH CAMU GROUNDWATER PCLE ZONE MAP (GROUNDWATER PLUME MAP)

GOLDER



ATTACHMENT A
STRATIGRAPHIC UNITS AND THEIR WATER-BEARING PROPERTIES

Era	System	Series	Group	Stratigraphic units				roximate aximum (ness (feet)	Character of rocks	Water-bearing characteristics
	0	Recent		Alluvium	-00-00-0		75		Sand, silt, clay and gravel.	Yields small to large amounts of water to wells
	Quaternary	Pleistocene		Fluviatile terrace of	deposits			/5	STATE OF THE STATE	along the Red River
Cenozoic	Tertiary	Eocene	Wilcox					100	Fine to medium sand with silt and clay	Yields small quantities of water to wells in the eastern part of the area.
	Tertiary	Paleocene	Midway					150	Gray, calcareous clay, in part silty to sandy	Do.
				Kemp Clay Corsicana Mari				300	Fossiliferous clay and hard limy marl	Not known to yield water to wells in the area.
			Navarro	Nacatoch Sand				500	Fine sand and marl, fossiliferous	Yields small to moderate quantities of water near the outcrop.
			Taylor	Maribrook Mari Pecan Gap Chalk Wolfe City - Ozan Formations				,500	Clay, mari, mudstone, and chalk	Yields small quantities of water to shallow wells.
		Gulf	Austin	Gober Chalk B rownstown Marl B lossom Sand B onham Formation				700	Chalk, limestone, and marl; fine to medium sand, fossiliferous	Yields small to moderate quantities of water to wells in the northeastern part of the area; very limited as an aquifer.
			Eagle Ford					650	Shale with thin beds of sandstone and limestone	Yields small quantities of water to shallow wells.
Van word Coden II			Woodbine					700	Medium to coarse iron sand, sandstone, clay and some lignite	Yields moderate to large quantities of water to municipal, industrial and irrigation wells.
Mesozoic	Cretaceous		Washita			- Denton Clay	1	,000	Fossiliferous limestone, marl, and clay; some sand near top	Yields small quantities of water to shallow wells.
			Fredericksburg	Edwards Limestone Goodland Comanche Peak Formation Limestone			250		Limestone, clay, marl, shale, and shell agglomerates	Do.
		Comanche		Walnut Formation	1				K	
		Comanche	Trinity		Paluxy Forma	Paluxy Formation		400	Fine sand, sandy shale, and shale	Yields small to moderate quantities of water to wells.
				Antlers Formation	Glen Rose Form			1,500	Limestone, marl, shale, and anhydrite	Yields small quantities of water in localized areas.
					Twin Mountains Formation			1,000	Fine to coarse sand, shale, clay, and basal gravel and conglomerate	Yields moderate to large quantities of water to wells.
Paleozoic				Paleozoic rocks un	ndifferentiated				Sandstone, limestone, shale and conglomerate	Yields small quantities of water in the western part of the area.

ATTACHMENT B BORING LOGS

# Golder

### LOG OF 2014-AD-03A

DRILLING METHOD: Direct Push

.

NORTHING: 7,101,762 FT

DATE/TIME: 04/04/2014, 1215

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,926 FT

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-		•			ML	2 2 4 4	0-0.5 FT, Concrete 0.5-2.0 FT, (ML) CLAYEY SILT; dark brown/black; dry, firm.
-	1	N/A	<u>4.0</u> 4.0	2-4 (1244)	СН		2.0-4.0 FT, (CH) CLAY; dark brown/black; dry, firm.
-5	2		<u>4.0</u> 4.0	4-6 (1245)	CL		4.0-6.0 FT, (CL) SILTY CLAY; dark brown/black; dry, firm.  6.0 FT, moist.
				6-8 (1246)			End of borehole at 8 FT BGS
- 10						The deconstruction of the second seco	
- 15				and the second s		THE CONTRACT OF THE CONTRACT O	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Administrative Area	REVIEWED BY:	JW

Golder
Associates

DATE/TIME: 04/04/2014, 1300

### LOG OF 2014-AD-06

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 4 FT BGS RIG: Geoprobe

NORTHING: 7,101,642 FT

EASTING: 2,480,942 FT

SURFACE ELEVATION: 636 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 661)	INU.	(F F IVI)	(1 661)			5000	0-0.5 FT, Concrete
					CL		0.5-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black; dry, soft to
-				0.5-1 (1309)			firm. 1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
			3.0				1.0 4.0 1 1, (OE) OET 1 OET 1, dank Brommback, dry, book to mini
F	1	N/A	3.0 4.0	1-2.5 (1310)			
					CL		
-							
				2.5-4 (1311)			
				, ,			End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	Administrative Area	REVIEWED BY:	JW	

### Log of Boring: 2013-AD-1 **Exide Technologies** 3/14/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): Field Supervisor: Will Vienne, P.G. Northing: 7101895.7037 2480807.5725 Will Vienne, P.G. PBW Project No. 1755 Logged By: Easting: Sampling Method: Ground Elev. (ft AMSL): --4' Lined Tube Recovery (ft/ft) Depth Sample Lithologic USCS Description Interval (ft) (0 - 5.0) FILL, dark grayish brown, moist, soft to slightly firm, low plasticity, concrete fragment at 1.5', moderately organic clay at 0-0.6' with abundant root fragments, very fine clayey sand with Fe staining 0.6-2.9', silty clay with trace limestone granules from 2.9-4', wet clayey sand with Fe ō 0 - 0.5 1 staining at 4-5'. 0.5 - 2 2 4/4 3 2 - 4 1/1

## **PBW**

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Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

### LOG OF 2013-AD-1A

DRILLING METHOD: Direct Push

DATE/TIME: 01/09/2014, 1345

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,873 FT EASTING: 2,480,792 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
		, ,		0.0-0.5	ML		0-0.5 FT, (ML) CLAYEY SILT; brown; dry, soft.
_				0.0-0.5 (1342) 0.5-2.0 (1343)	CL		0.5-2.0 FT, (CL) SILTY CLAY; brown; moist, soft.
ener	1	NA	<u>4.0</u> 4.0	`	SM	<del>////</del>	2.0-2.5 FT, (SM) SILTY SAND; gray/brown; moist, compact.
					CL/SC		2.5-3.0 FT, (CL/SC) sandy SILTY CLAY; brown; dry, firm.
- 1				2.0-4.0	000	<del>////</del>	3.0-4.0 FT, (ML) SANDY SILT; brown, friable, dry, soft.
			٠	(1344)	ML		
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Admin Bldg	REVIEWED BY:	JW

### Log of Boring: 2013-AD-2 **Exide Technologies** DPT Completion Date: 4/29/2013 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: Will Vienne, P.G. 7101914.0818 Northing: Field Supervisor: Logged By: Will Vienne, P.G. Easting: 2480989.7962 PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Recovery Lithologic Depth Sample USCS Interval Description (ft) (0 - 4.0) FiLL, sandy to silty clay, sandy clay from 0-3', silty clay from 3-4', brown, very dark gray from 3-4', common limestone granules, trace limestone pebbles, trace root/plant material. 0 1 0.5 - 23.5/4 3 2 - 4 4 (4.0 - 5.0) FILL, clayey sand, gray, wet, no cementation, soft, abundant peoble and granule sized gravel. 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

### Log of Boring: 2013-AD-2A **Exide Technologies** 3/27/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Margarito Estrada Frisco, TX Driller's License: 58164 Total Depth (ft): 7101930.698 Field Supervisor: Tim Jennings, P.G. Northing: 2481017.163 Tim Jennings, P.G. PBW Project No. 1755 Logged By: Easting: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) Depth Sample Lithologic uscs Interval Description (ft) (0 - 0.5) CONCRETE SLAB 0 CON (0.5 - 1.7) Silly CLAY, grayish brown, trace fine gravel, moist, no cementation, soft, high plasticity. 1 CH 0.5 - 2(1.7 - 5.5) Silty CLAY, light brownish-orange, few carbonate nodules (fine-very fine), moist, wet below 5.3', firm to soft, medium plasticity. 2 5/5 2 - 4 3 4 4 - 5 5 0.5/1 6

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached



### LOG OF 2013-AD-3

DRILLING METHOD: Direct Push

DATE/TIME: 01/09/2014, 1300

TOTAL DEPTH: 4 FT BGS

DRILLER: SCI, Margarito Estrada

RIG: Geoprobe

NORTHING: 7,101,762 FT

EASTING: 2,480,927 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5		0 4 4 9	0-0.5 FT, Concrete
				0.0-0.5 (1310)	CL		0.5-1.0 FT, (CL) SILTY CLAY; black/dark gray; dry, stiff.
				0.5-2.0	СН		1.0-1.5 FT, (CH) CLAY; brown; dry, firm.
	1	NA	4.0 4.0	2.0-4.0 (1313)	CL		1.5-4.0 FT, (CL) CLAY, trace gravel; black/dark gray; dry, firm.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Admin Bldg	REVIEWED BY:	JW



### LOG OF 2013-AD-4

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,685 FT EASTING: 2,480,811 FT

DATE/TIME: 01/09/2014, 1330
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH	RUN	- PID	REC			GRAPHIC LOG	DESCRIPTION AND SERVICES
(Feet)	No.	PID (PPM)	(Feet)	SAMPLE	USCS ML		
				0.0-0.5	ML	11/2 11/2	\ 0.25-0.5 FT, (ML) SANDY SILT; light brown; dry, soft.
		4		(1326)	СН		0.5-1.0 FT, (CL) CLAY; black; dry, very stiff.
				0.5-2.0	СН		1.0-1.5 FT, (CL) CLAY; light brown/gray; dry, stiff.
-	1	NA	4.0 4.0	2.0-4.0 (1328)	CL		1.5-4.0 FT, (CL) SILTY CLAY, some fine gravel; black/dark gray, friable, trace calcareous nodules; dry, hard.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Admin Bldg	REVIEWED BY:	JW



### LOG OF 2013-AD-5

DRILLING METHOD: Direct Push

NORTHING: 7,101,826 FT

DATE/TIME: 01/09/2014, 1415

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,595 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1412) 0.5-2.0 (1413)	CL		0-2.0 FT, (CL) SILTY CLAY; dark brown, orange mottling; dry, firm.
	1	NA	3.8 4.0	2.0-4.0 (1414)	CL		2.0-4.0 FT, (CL) SILTY CLAY, trace fine gravel; black, friable, trace calcareous nodules; dry, hard.
-5							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Admin Bldg	REVIEWED BY:	JW



### LOG OF B3RA

DRILLING METHOD: Direct Push

NORTHING: 7,101,497 FT

DATE/TIME: 03/31/2014, 1615

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,989 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 653 FT AMSL

						1	
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_				0.0-0.5 (1614) 0.5-2.0 (1615)	CL		0.0-2.5 FT, (CL) CLAY, some silt, trace gravel; dark brown and black; dry, firm-stiff.
	1 N/A 4.3 5.0		4.3 5.0	2.0-4.0 (1616)	СН		2.5-4.0 FT, (CH) CLAY; brown; dry, soft-firm. 4.0-5.0 FT, Not Logged.
<u>-5</u>		-					End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	West of South Disposal Area	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		Log of Boring: 2013-B4R-A					
		······································			Completion Date:		4/29/2013	Drilling Method:	DPT		
		Recyclin		r	Driller:	***************************************	Margarito Estrada	Borehole Diameter (in.):	2		
	Frisco, TX Driller's L						58164	Total Depth (ft):	5		
	Field Su						Will Vienne, P.G.	Northing:	7101414.5525		
	PBW Project No. 1755 Logged E					Зу:	Will Vienne, P.G.	Easting:	2479942.58		
					Sampling	Method:	4' Lined Tube	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (fl/fl)	Sample Interval	USCS		Lithologic Description						
0		0 - 0.5		(0 - 5.0) dry, com	Silty CLA\ Imon Fe st	/, brownisi taining, no	h gray, slightly sandy at to moderate cementation	4.0-5.0', some fissile fragment on, some cementation at 4.4-4	s near base. .5', low plasticity.		
1	nado o manda de la composição de la comp	0.5 - 2									
2	3.6/4										
3	and the state of t	2-4									
4											
	1/1	4-5									

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used separately from the report to which it is attached.

					Completion Date:	5/21/2013	Drilling Method:	DPT		
	Frisco		ng Cente	r	Driller:	Dan Spaust	Borehole Diameter (in.)	<b>2</b>		
		Frisco,	ГХ		Driller's License:	3038	Total Depth (ft):	8		
***************************************	***************************************		<del></del>	······································	Field Supervisor:	Tim Jennings, P.G.	Northing:	7102006.534		
PBW Project No. 1755					Logged By:	Tim Jennings, P.G. Easting: 2480117.37				
		-			Sampling Method:	4' Lined Tube				
epth (ft)	Recovery (fl/fl)	Sample Interval			Lithologic Description					
0			CON	(0 - 0.9)	CONCRETE SLAB					
1		**************************************	SFILLS	(0.9 - 1.	3) FILL, sand and gra	avel road base.				
2	3.1/4	0.9 - 2			1) Clayey SILT, silty t, high plasticity.	CLAY, dark grayish brow	n, -20% medium sand from	1.3-1.6', wet,		
-	3.17	2-3	СН/МН							
3 -			NR	(3.1 - 4.	0) No recovery.		CONTROL CONTRO			
4		4 - 5	CH	(4.0 - 5.	4) Silty CLAY, light g	ray to black, wet, soft to f	irm, high plasticity.			
5		\$1.00m200mmmmm20100000		/5 A . R	0) No recovery.					
6	1.4/4	ANT (01) ANT (01) ANT (01)		(0.4 - 0.	of 140 recovery.					
.46			NR							

## PBW

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

	Exic	de Te	chnol	ogies		Log of Boring: 2012-BG-1						
					Complet	on Date:	3/29/2012	Drilling Method:	Hand Sampler			
Frisco Recycling Center D					Drilling C	ompany:	NA	Borehole Diameter (iп.):	2.25			
Frisco, TX					Driller:	annece Service a Morrows	NA	Total Depth (ft):	2			
Driller						icense:	NA	Northing:	7098992.01			
PBW Project No. 1755 Logged						Зу:	Christopher Moore, P.G.	Easting:	2476012.67			
	, DVV I	TOJCOLIT	0. 1700		Sampling	Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs		Lithologic Description							
0 -	0.9/2.0	0-2	135	(0 - 2.0) material	(0 - 2.0) CLAY, CH, light brown, moist, soft to firm, medium to high plasticity, no staining or foreign material observed, no odor.							
2												

Borehole backfilled with cuttings upon completion.

This Log of Boring should not be used seperately from the report to which it is attached.

	Exic	de Te	chnol	ogies		Log of Boring: 2012-BG-2					
					Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler		
	Frisco Recycling Center Drilling						NA	Borehole Diameter (in.):	2.25		
l	Frisco, TX Drille						NA	Total Depth (ft):	2		
<u> </u>					Driller's I	License:	NA	Northing:	7099083.46		
PBW Project No. 1755							Christopher Moore, P.G.	Easting:	2476047.00		
1	Sampling						2"x 2' Barrel	Ground Elev. (ft AMSL):	me .		
Depth (ft)	Recovery (fl/ff)	Sample Interval	USCS		Lithologic Description						
0				(0 - 2.0) or foreig	0 - 2.0) SILTY CLAY, CL., dark brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.						
1 -	1,3/2.0	0-2									

Notes:

Borehole backflied with cuttings upon completion.

This Log of Boring should not be used separately from the report to which it is attached,

	Exi	de Te	chnol	ogies		Log of Boring: 2012-BG-3					
			<del></del>		Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler		
	Frisco Recycling Center Drilling						NA	Borehole Diameter (in.):	2.25		
		Frisco, T	X		Driller:	<u></u>	NA	Total Depth (ft):	2		
					Driller's L	icense:	NA	Northing:	7099093.22		
PBW Project No. 1755 Logs						Зу:	Christopher Moore, P.G.	Easting:	2475820.22		
		.0,00011			Sampling	Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	-		
Depth (ft)	Recovery (ff/ff)	Sample Interval	uscs		Lithologic Description						
1		0-2		(0 - 2.0) or foreig	(0 - 2.0) SILTY CLAY, CL, dark brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.						

Notes.

Burehole backfilled with cuttings upon completion.

This Log of Boring should not be used seperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-BG-4					
		·······			Completion Date:		3/29/2012	Drilling Method:	Hand Sampler		
		Recyclin		r	Drilling Company:		NA	Borehole Diameter (in.):	2.25		
		Frisco, T	Х		Driller:		NA	Total Depth (ft):	2		
***************************************					Driller's L	icense:	NA	Northing:	7099222.60		
	PBW Project No. 1755						Christopher Moore, P.G.	Easting:	2475950.23		
	, 5,,,	10,00111	0. 1100		Sampling Method:		Hand Auger	Ground Elev. (ft AMSL):	**		
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs				Lithologic Descri				
0 1	2.0/2.0	0-2		(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.							
2						an and an and an			***************************************		

Notes:
Borehole backfilled with cultings upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exide Technologies						Log of Boring: 2012-BG-5					
					Completion Date:		3/29/2012	Drilling Method:	Hand Sampler			
	Frisco Recycling Center Drilling					company:	NA	Borehole Diameter (in.):	2.25			
	Frisco, TX Driller:						NA	Total Depth (ft):	2			
<b></b>	Driller's						NA	Northing:	7099109.89			
	PRW F	Project N	lo. 1755		Logged I	Ву:	Christopher Moore, P.G.	Easting:	2475620.3			
	, 5,,,,	,0,00111			Sampling	g Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	-			
Depth (ft)	Recovery (#/ft)	Sample Interval	uscs	·			Lithologic Descri	'				
1	1.4/2.0	0-2	et/	(0 - 2.0) roots, no	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace sand, trace roots, no staining or foreign material observed, no odor.							

Borehole backfilled with cultings upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies		I	Log of Boring	g: 2012-BG-6	)		
					Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler		
	Frisco Recycling Center Drillin Frisco, TX						NA	Borehole Diameter (in.):	2.25		
		Frisco, i	X		Driller:	CARROLANDA CONTOCA DA CARROLA	NA	Total Depth (ft):	2		
<b> </b>	Dril						NA	Northing:	7099308.28		
	PBW I	roject N	o. 1755		Logged I	Зу:	Christopher Moore, P.G.	Easting:	2475765.83		
					Sampling Method:		Hand Auger	Ground Elev. (ft AMSL):	-		
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	-			Lithologic Descri	ption			
1	2.0/2.0	0-2		(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, staining or foreign material observed, no odor.							

Borehole backfilled with cuttings upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies			Log of Boring	յ։ 2012-BG-7	,			
<u> </u>				***************************************	Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler			
	Frisco Recycling Center Drilling						NA	Borehole Diameter (in.):	2.25			
	Frisco, TX Driller:						NA	Total Depth (ft):	2			
<b></b>				***************************************	Driller's L	lcense:	NA	Northing:	7099174.55			
	PBW F	roject N	a. 1755		Logged E	Эу:	Christopher Moore, P.G.	Easting:	2475459.86			
		,			Sampling	Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (fl/ff)	Sample Interval	uscs				Lithologic Descri					
0 - 1	1.4/2.0	0-2		(0 - 2.0) staining	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.							
2												

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes:

Borehole backfilled with cuttings upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exide Technologies						Log of Boring	g: 2012-BG-8	}			
				<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler			
		Recyclin		r	Drilling Company:		NA	Borehole Diameter (in.):	2.25			
	Frisco, TX Driller						NA	Total Depth (ft):	2			
<b></b>					Driller's L	icense:	NA	Northing:	7099468.68			
1	PBW F	Project N	lo. 1755		Logged I	Зу:	Christopher Moore, P.G.	Easting:	2475553.85			
	, =				Sampling	Method:	Hand Auger	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs				Lithologic Descri	•				
0 .				(0 - 2.0) staining	(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.							
1 -	2,0/2.0	0-2										

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Borehole backfilled with cultings upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies		1	Log of Boring	g: 2012-BG-9	)			
					Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler			
I	Frisco TX					ompany:	NA	Borehole Diameter (in.):	2.25			
		Frisco, I	X		Driller:		NA	Total Depth (ft):	2			
-	Driller						NA	Northing:	7099228.98			
	PBW F	Project N	lo. 1755		Logged I	Зу:	Christopher Moore, P.G.	Easting:	2474750.45			
l					Sampling	g Melhod:	2"x 2' Barrel	Ground Elev. (ft AMSL):	***			
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS				Lithologic Descri	•				
1	1.6/2,0	0-2	ek.	(0 - 2.0) limeston odor.	(0 - 2.0) SILTY CLAY, CL, dark grayish brown, moist, soft to firm, medium plasticity, trace limestone gravel, trace roots, some dark red oxidized staining, no foreign material observed, no odor.							

Borshole backfilled with cuttings upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exide Technologies						Log of Boring: 2012-BG-10					
	<b>-</b> .			- <del></del>	Completi	on Date:	3/29/2012	Drilling Method:	Hand Sampler			
	Frisco Recycling Center Drilling						NA	Borehole Diameter (in.):	2.25			
	Frisco, TX Driller:						NA	Total Depth (ft):	2			
			<del></del>		Driller's L	_icense:	NA	Northing:	7099466.86			
	PBW F	roiect N	lo. 1755		Logged I	Эу:	Christopher Moore, P.G.	Easting:	2474833,08			
		•			Sampling	Method:	Hand Auger	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (fl/ff)	Sample Interval	uscs				Lithologic Descri	ption				
1	2.0/2.0	0-2			(0 - 2.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.							

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Borahole backfilled with cultings upon completion.
This Log of Baring should not be used separately from the report to which it is attached.

### **Exide Technologies** Log of Boring: 2013-BS2-1 4/29/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Frisco, TX Driller: Margarito Estrada Borehole Diameter (in.): 2 Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. Field Supervisor: Northing: 7101512.9229 2480177.639 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) Lithologic Description Depth Sample USCS Interval (ft) (0 - 5.0) Sitty CLAY, common limestone granules and calcareous precipitates, brownish gray, trace mottled Fe staining, dry, soft to firm, low to medium plasticity. 0 1 0.5 - 2 2 3.7/4 3 2 - 4 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

	ĽΧI	de Te	canol	ogies	j	ı	Log of Bori	ily. Do-s				
			***************************************		Completio	n Date:	3/4/2013	Drilling Method:	DPT			
	Frisco	Recyclin		r	Driller:		Margarito Estrada	Borehole Diameter (in.):	2			
	Frisco, TX Driller's					cense:	58164	Total Depth (ft):	5			
	Field Su					ervisor:	Will Vienne, P.G.	Northing:	7101491.1574			
	PBW I	Project N	o. 1755		Logged By	<b>y</b> :	Will Vienne, P.G.	Easting:	2480214.5135			
		-,			Sampling	Method:	5' Lined Tube	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs		Lithologic Description							
0 -		70777777777		pebbles	at 0-0.6', so	oft clay w	ark brownish gray, roots ith abundant limestone on to medium plasticity.	and clay with abundant limest clay granules at 0.6-3.3', firm s	one and shale ilty clay at 3,3-			
2 ~		1-2										
3	5/5	2-4	<b>CL</b>									
4		4 - 5										

## PBW

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used separately from the report to which it is attached.

### Log of Boring: 2013-BS5-1 **Exide Technologies** Completion Date: 4/29/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Driller's License: Total Depth (ft): Northing: 7101471.5118 Will Vienne, P.G. Field Supervisor: 2480114.1188 Logged By: Will Vienne, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL); --Sampling Method: 4' Lined Tube Recovery (ft/ft) Lithologic Description Depth (ft) Sample USCS Interval (0 - 5.0) Sandy, silty CLAY, brownish gray,trace yellow precipitate below 2.9', moderate to abundant Fe staining, moist, soft, low plasticity. 0 1 0.5 - 24/4 2 - 4 3 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

	Exide Technologies						Log of Boring	g: 2012-BSA	-1			
					Completion Date:		1/4/2012	Drilling Method:	Geoprobe			
	Frisco Recycling Center Frisco, TX					ompany:	StrataCore	Borehole Diameter (in.):	2.25			
		Frisco, i	I X		Driller:		Mario Robles	Total Depth (ft):	2			
	Dilli						52694	Northing:	7102274.07			
	PBW F	Project N	lo. 1755		Logged I	Зу:	Christopher Moore, P.G.	Easting:	2480624.4			
					Sampling	Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS				Lithologic Descri	ption				
1	2.0/2.0	0-2	c.		(0 - 2.0) SILTY CLAY, CL, mottled black and brown, moist, soft to firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.							

Notes:
Boring location hand probed to 3 feet to check for utilities.
Borehole plugged with bentonite chips upon completion,
This Log of Boring should not be used separately from the report to which it is attached.

### Log of Boring: 2012-BSA-2 **Exide Technologies** DPT Completion Date: 4/29/2013 Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. Northing: 7102274.2792 Field Supervisor: 2480735.1448 Logged By: Will Vienne, P.G. Easting: PBW Project No. 1755 Sampling Method: Ground Elev. (ft AMSL): --4' Lined Tube Lithologic Description Sample Depth USCS Interval (ft) (0 - 5.0) CLAY and Silty CLAY, very dark gray, trace orange Fe mottling, trace limestone pebbles, moderately abundant limestone granules, dry to slightly moist, firm, low to medium plasticity. 0 1 2 4/4 3 2 - 4 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

# Golder

### LOG OF 2013-BSA-2A

DRILLING METHOD: Direct Push

NORTHING: 7,102,283 FT

DATE/TIME: 01/09/2014, 1245

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,731 FT

TOTAL DEPTH: 4 FT BGŞ

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-				0.0-2.0 (1250)	ML/SM		0-1.5 FT, FILL (ML/SM) GRAVELLY SILT and SAND; brown/gray; dry.
	. 1	NA	4.0 4.0	(1230)	CL/CH		1.5-4.0 FT, (CL/CH) SILTY CLAY and CLAY; dark gray; dry, very stiff.
							End of borehole at 4 FT BGS
-5							
- 10		1		1			
	**Crising					1,1111111111111111111111111111111111111	
- 15							
T TRACE							
	Addition			100			

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Bale Stabilization Area	REVIEWED BY:	JW

	Exic	de Te	chnol	ogies			Log of Boring	j: 2012-BSA	-3			
	***************************************	<del></del>	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>		Completi	on Date:	1/4/2012	Drilling Method:	Geoprobe			
	Frisco Recycling Center Drilling						StrataCore	Borehole Diameter (in.):	2.25			
	Frisco, TX Driller:						Mario Robles	Total Depth (ft):	2			
<u></u>					Driller's L	icense:	52694	Northing:	7102224.29			
	PRW F	Project N	lo. 1755		Logged E	Зу:	Christopher Moore, P.G.	Easting:	2480672.30			
		10,00111			Sampling	Method:	2"x 4' Barrel	Ground Elev. (ft AMSL): -				
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs				Lithologic Descri					
1	2.0/2.0	0-2	e)ch	(0 - 2.0) carbona	(0 - 2.0) CLAY, CL/CH, very dark brown, moist, firm, medium to high plasticity, some sand size carbonate nodules, gravel fill on surface, no staining observed, no odor.							
_ ر ا												

Notes:

NOUSES.

Bornig location hand probed to 3 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used esperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-BSA-4						
		··········			Completion Date:		1/4/2012	Drilling Method:	Geoprobe			
		Recyclin		٢	Drilling Company:		StrataCore	Borehole Diameter (in.):	2.25			
		Frisco, T	X		Driller:		Mario Robles	Total Depth (ft):	2			
				***************************************	Driller's l	icense:	52694	Northing:	7102173.2055			
	PRW F	rolect N	o 1755		Logged	Зу:	Christopher Moore, P.G.	Easting:	2480638.61			
		10,00111	0. 1700		Sampling	Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs				Lithologic Descri					
1	2.0/2.0	0-2	ouch coch	or foreig	(0 - 0.5) SILTY CLAY, CL, brownish yellow, moist, soft, medium plasticity, trace gravel, no staining or foreign material observed, no odor. (0.5 - 2.0) CLAY, CL/CH, very dark brown, moist, firm, medium to high plasticity, some sand size carbonate nodules, no staining observed, no odor. 1.7: black plastic fragment (1" x 1", 1/8" thick).							

PBW

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:

Porting location hand probed to 3 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used seperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-BSA-5						
				····	Completion Date:		1/4/2012	Drilling Method:	Geoprobe			
		Recyclin		r	Drilling C	ompany:	StrataCore	Borehole Diameter (in.):	2.25			
1		Frisco, 1	ΓΧ .		Driller:	anne gamerangaran	Mario Robles	Total Depth (ft):	2			
-	ww.+v				Driller's L	icense:	52694	Northing:	7102165.32			
	PRW I	Project N	lo 1755		Logged B	Зу:	Christopher Moore, P.G.	Easting:	2480739.17			
	PBW Project No. 1755 Logger Sampli						2"x 4' Barrel	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (fl/ft)	Sample Interval	USCS				Lithologic Descri	otion	-			
0				plasticity	, some sa	nd size ca	ottled very dark grayish brov rbonate nodules, gravel fill o	on surface, no staining obs	served, no odor.			
1 -	2.0/2.0	0-2	CUCH	(0.7 - 2.1 nodules	(0.7 - 2.0) CLAY, CLCH, dark gray, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor.							
2 -	1	1	1777777	L	manifestation // colderweiseb	~~~~			un communication of the commun			

PBW

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Boring location hand probed to 3 feet to check for utilities.
Borehole plugged with bentonize chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

		-	_		Completio	n Date:	3/5/2013	Drilling Method:	DPT			
	Frisco	Recyclin		r	Driller:		Margarito Estrada	Borehole Diameter (in.):	2			
		Frisco, 1	X		Driller's Li	cense:	58164	Total Depth (ft):	5			
<del></del>			<del></del>		Field Sup	ervisor:	Tim Jennings, P.G.	Northing:	7102200.9899			
	PBW I	Project N	o. 1755		Logged B	y:	Roberta Russell	Easting:	2480652.3935			
		,			Sampling	Method:	5' Lined Tube	Ground Elev. (ft AMSL):	••••			
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs		Lithologic Description							
1		0 - 2		(0.3 - 5.1	(0 - 0.3) FILL, sand w/gravel, light reddish brown, unconsolidated, dry, hard. (0.3 - 5.0) FILL, silty clay, trace gravel, reddish brown, plastic bag fragment and mulch @ 4.9', moist, firm, low plasticity.							
3	5/5		FICE									

## **PBW**

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Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-BSA-7 **Exide Technologies** 3/5/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Northing: 7102250.9587 Field Supervisor: 2480715.8882 PBW Project No. 1755 Logged By: Roberta Russell Easting: Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Recovery (fl/ft) Sample Interval Lithologic Depth USCS Description (ft) (0 - 1.3) FILL, surficial fill not associated with NDA, clay with sand and gravel, ~30-40% medium gravel and sand, no foreign objects (e.g. slag, battery chips or trash) observed, light reddish brown, 0 FILL dry, firm, low plasticity. 0 - 2 (1.3 - 5.0) Silly CLAY, dark reddish brown, trace calcareous nodules from 4.5-5', moist, firm, low 2 5/5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-BSB-1 **Exide Technologies** Completion Date: 4/11/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.) 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Northing: 7102047.0799 Field Supervisor: Tim Jennings, P.G. Easting: Logged By: Roberta Russell 2479711.821 PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Lithologic (#/#) Depth Sample USCS (ft) Interval Description (0 - 0.9) CONCRETE SLAB Ō CON (0.9 - 6.3) FILL, clayey sand, reddish yellow, increasing clay content with depth, with trace black, 1 very fine gravel, moist, soft, low plasticity. 0.9 - 2 3.4/4 3 2 - 4 4 - 5 4/4 (6.3 - 9.3) FILL, silty clay, dark reddish brown, trace slag (<0.1") from 6.3-7.7', gravel lens at 9.2-9.3', moist, firm, low plasticity. 6.3 - 7.7 7 8 9 8 - 10 (9.3 - 12.0) Silty CLAY, dark reddish brown, trace red mottling, trace calcareous nodules, moist, wet at 11.6', firm, low plasticity. 4/4 10 11 11.6 12

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-2 **Exide Technologies** Completion Date: 4/11/2013 DPT Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Driller's License: Total Depth (ft): 12 7102035.3349 Tim Jennings, P.G. Field Supervisor: Northing: Logged By: Roberta Russell Easting: 2479770.635 PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample USCS (ft) Interval Description (0 - 0.9) CONCRETE SLAB 0 CON 1 (0.9 - 5.4) FILL, clayey sand, reddish yellow, trace black staining from 4.0-5.4', greater clay content with depth, with trace black, well-rounded, very fine gravel from 0.9-1.1', moist, soft. 0.9 - 23,4/4 3 2 - 4 5 (5.4-8.9) FILL, silty clay, dark reddish brown, trace slag fragments (<0.1") from 5.7-6.6', large battery chip (~1.5") at 6.4', gravel lens at 7.2-7.4' (~40% fine-medium gravel in silty clay matrix), 6 4/4 moist, soft, low plasticity. 7 9 8 - 10 (8.9 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.2', soft to firm, low plasticity. 10 4/4 11 11.2 12

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-3 **Exide Technologies** Completion Date: 4/10/2013 DPT Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Northing: 7102029.7369 Field Supervisor: 2479797.551 PBW Project No. 1755 Logged By: Roberta Russell Easting: Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Recovery Lithologic Depth (<u>I</u> Sample **USCS** Description Interval (ft) 0 (0 - 0.9) CONCRETE SLAB CON (0.9 - 4.0) FILL, silty, clayey sand, reddish yellow, with a black, well-rounded and hard coarse pebble at 2.6' (likely Fe nodule), moist, soft to firm. 0.9 - 24/4 2 3 2 - 4 (4.0 - 5.0) FILL, sandy clay, reddish yellow, moist, soft, low plasticity. 4 - 5 (5.0 - 7.1) Fill, sifty clay, dark reddish brown, sifty gravel lens from 7-7.1 (-50% medium to coarse gravel), moist, soft to firm, low plasticity. 5 4/4 6 7 (7.1 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity. 8 9 8 - 10 10 4/4 11 11 12

## **PBW**

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#### Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-4 **Exide Technologies** 4/10/2013 DPT Completion Date: Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7102020.0503 Field Supervisor: Northing: Logged By: Roberta Russell Easting: 2479814.7476 PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample USCS Description (ft) Interval (0 - 0.9) CONCRETE SLAB ō CON 1 (0.9 - 4.8) FILL, silty, clayey sand, reddish yellow, moist, soft. 0.9 - 2 2 3.1/4 3 2 - 4 4 4 - 5 (4.8 - 7.2) FILL, silty clay, dark reddish brown, gravel lens (~70% fine to medium gravel) from 7.0-7.2', moist, soft to firm, low plasticity. 5 4/4 6 7 (7.2 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity. 8 8 - 10 9 10 4/4 11 11 12

## **PRW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-5 **Exide Technologies** 4/11/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Northing: 7102021.0899 Field Supervisor: 2479781.149 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: Ground Elev. (ft AMSL): --4' Lined Tube Recovery (ft/ft) Lithologic Depth Sample USCS Description (ft) Interval (0 - 0.9) CONCRETE SLAB ō CON (0.9 - 5.6) FILL, clayey sand, reddish yellow, trace black staining, moist, soft, increasing clay 1 content with depth. 0.9 - 22 3,1/4 3 2 - 4 4 5 (5.6 - 8.6) FILL, sitty clay, dark reddish brown, trace slag fragments from 5.6-8', trace coarse gravel 4/4 (8.6 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.2', firm, low plasticity. 8 - 10 9 10 4/4 11 11,2 12

## **PRW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-6 **Exide Technologies** 4/11/2013 Completion Date: Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): 12 Tim Jennings, P.G. 7102030.9419 Field Supervisor: Northing: PBW Project No. 1755 Logged By: Roberta Russell Easting: 2479850.401 Sampling Method: Ground Elev. (ft AMSL): --4' Lined Tube Recovery (fl/fl) Depth Sample Lithologic USCS Interval Description (ft) 0 (0 - 0.9) CONCRETE SLAB CON (0.9 - 5.7) FILL, clayey sand, reddish yellow, moist, soft to firm, low plasticity. 0.9 - 2 2 2.5/4 3 2 - 4 4 4 - 5 5 (5.7 - 9.3) FILL, silly clay, dark reddish brown, gravel lens (~40% medium to coarse gravel in silly 4/4 6 clay matrix) with abundant slag (~30% fine gravel-sized) at 7.2-7.3', slag fragment (<0.2") at 8.7', moist, firm, low plasticity. 7 8 9 8 - 10 (9.3 - 12.0) Silty CLAY, dark reddish brown, trace calcareous precipitates, moist, wet at 11.1', soft to firm, low plasticity. 10 4/4 11 11.1 12

## **PBW**

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#### Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-7 **Exide Technologies** 4/10/2013 Completion Date: Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7102020.6659 2479830.487 PBW Project No. 1755 Logged By: Roberta Russell Easting: Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ff) Depth Sample Lithologic USCS Description Interval (ft) ō (0 - 0.9) CONCRETE SLAB CON (0.9 - 5.3) FILL, clayey sand/sandy clay, reddish yellow, ~10% black and red well-rounded very fine gravel, moderate black staining, moist, soft to firm, low plasticity. 0.9 - 2 2 3.4/4 3 2 - 4 4 - 5 5 (5.3 - 9.1) FILL, silty clay, dark reddish brown with moderate yellowish brown staining, gravel lens from 7.0-7.1', slag fragments with some black metallic and trace red oxidized material at 7.1', 4/4 6 moist, firm, low plasticity. 7 8 9 8 - 10 (9.1 - 12.0) Silty CLAY, dark reddish brown, trace calcareous precipitates, moist, wet at 11.0', soft to firm, low plasticity. 10 4/4 11 11 12

## **PBW**

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#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### **Exide Technologies** Log of Boring: 2013-BSB-8 Completion Date: 4/10/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. 7102044.5099 Northing: Logged By: Roberta Russell PBW Project No. 1755 Easting: 2479811.731 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/fl) Depth Sample Lithologic USCS (ft) Interval Description 0 (0 - 0.9) CONCRETE SLAB CON 1 (0.9 - 3.5) FILL, silty sand, reddish yellow, moist, unconsolidated. 0.9 - 2 2 3.5/4 3 2 - 4 (3.5 - 5.9) FILL, silty, sandy clay, reddish brown, moist, soft, low plasticity. 4 - 5 5 FIL 6 2.5/4 (5.9 - 9.5) FILL, silty clay, dark reddish brown, slag fragments at 8.0 and 9.3', moist, soft, low plasticity. 7 8 9 8 - 10 (9.5 - 12.0) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity. 10 3.5/4 11 11 12

## **PBW**

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#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

## LOG OF 2013-BSB-8A

DRILLING METHOD: Direct Push

NORTHING: 7,102,056 FT

DATE/TIME: 01/13/2014, 0930

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,815 FT

TOTAL DEPTH: 20.75 FT BGS

RIG: Geoprobe

					I		DESCRIPTION AND COMMENTS
						2000	0-0.75 FT, Concrete
	1		3.5 4.0		ML		0.75-2.75 FT, FILL, (ML) SANDY SILT, some gravel; light brown; moist, soft.
					CL/SC		2.75-5.5 FT, (CL/SC) sandy SILTY CLAY; light brown; dry, soft-firm.
-5	2		4.0				5.5-7.5 FT, (CL) SILTY CLAY, trace fine gravel; brown/gray; moist, soft.
	2		<u>4.0</u> 4.0	The state of the s	CL		
				_			7.5-9.0 FT, (CL) CLAY; black; dry, very stiff.
					СН		
				8-10 (0950)	ML/SM		9.0-9.5 FT, (ML/SM) sandy CLAYEY SILT; light brown/black; moist, soft.
10	3	NA	4.0 4.0		СН		9.5-13.0 FT, (CL) CLAY; black; slightly moist, soft-firm.
				-			13.0-13.5 FT, (ML/SM) sandy CLAYEY SILT; light brown/black; damp, soft.
			20	-	ML/SM		13.5-15.5 FT, (CL) CLAY; black; damp-wet, very soft.
15	4		3.8 4.0		СН		
-					СН		15.5-16.75 FT, (CL) CLAY, some gravel at 16 FT; black; dry, firm.
	5		4.0 4.0		СН		16.75-19.75 FT, (CL) CLAY, some gravel at 19 FT; black; wet, very soft.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Battery/Receiving Storage	REVIEWED BY:	JW



## LOG OF 2013-BSB-8A

DRILLING METHOD: Direct Push

NORTHING: 7,102,056 FT

DATE/TIME: 01/13/2014, 0930

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,815 FT

TOTAL DEPTH: 20.75 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(* = = 7		(	(,,		GC/ML		19.75-20.75 FT, (GC/ML) CLAYEY GRAVEL and SILT; brown; wet, dense. (Continued)
_						7.7	End of borehole at 20.75 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Battery/Receiving Storage	REVIEWED BY:	JW

#### Log of Boring: 2013-BSB-9 **Exide Technologies** 4/10/2013 DPT Drilling Method: Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): 7102065.3359 Tim Jennings, P.G. Northing: Field Supervisor: 2479812.374 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Lithologic Depth (#/#) Sample uscs Interval Description (ft) (0 - 0.9) CONCRETE SLAB 0 CON 1 (0.9 - 3.3) FILL, silty sand, reddish yellow, very moist (possibly from concrete corer), soft. 0.9 - 22 4/4 2 - 4 3 (3.3 - 6.0) FILL, sandy clay, reddish yellow, gravelly clay lens at 6.0', moist, soft, low plasticity. 4 - 5 5 6 3/4 (6.0 - 8.1) FILL, silty clay, dark reddish brown, moderate orange staining, moist, soft, low plasticity. 7 8 (8.1 - 9.2) FILL, sandy clay, reddish brown, moist, soft, low plasticity. 9 8 - 10 (9.2 - 16.6) Silty CLAY, dark reddish brown, moist, wet at 11.0', firm, low plasticity. 10 4/4 11 12 13 14 15 16 (16.6 - 17.8) Clayey GRAVEL, ~60% medium gravel, light reddish brown, wet, soft. ် (၁၅ 17 (17.8 - 18.4) Silty CLAY, light reddish brown, wet, firm, low plasticity. 18 4/4 (18.4 - 18.9) Calcareous CLAY, light reddish brown with orange staining, wet, firm, low plasticity. 19 (18.9 - 19.8) Clayey GRAVEL, ~ 70% medium to coarse gravel, light reddish brown, wel, soft. · gç .°. (19.8 - 20.0) Calcareous CLAY, light reddish brown with orange staining, wet, firm, low plasticity. 20 Notes:

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Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-BSB-10 **Exide Technologies** 4/11/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Driller's License: Total Depth (ft): 7102049.9659 Tim Jennings, P.G. Northing: Field Supervisor: 2479884.153 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Recovery (ft/ft) Lithologic Depth Sample USCS Description (ft) Interval (0 - 0.9) CONCRETE SLAB 0 CON (0.9 - 4.9) FILL, clayey sand, reddish yellow, moist, soft to firm, low plasticity, greater clay content with depth; with black, well-rounded, coarse pebble at $4.0^{\circ}$ . 1 0.9 - 22 3.5/4 2 - 4 3 4 - 5 (4.9 - 10.4) FILL, silty clay, dark reddish brown, moist, soft to firm, low plasticity, ~10% slag (fine to medium gravel-sized) from 5.5-7.9', gravelly clay lens (~20% medium to coarse gravel in silty clay 5 matrix) from 6.6-6.7'. 3.6/4 7 8 9 8 - 10 10 4/4 (10.4 - 12.0) Silty CLAY, dark reddish brown, moist to wet, soft to firm, low plasticity, saturated at 11 12

## **PBW**

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#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exic	de Te	chnol	ogies			_og of Boring	j: 2012-BY-1			
			- C4-	_	Completion	on Date:	1/4/2012	Drilling Method:	Geoprobe		
			ig Cente	r	Drilling C	ompany:	StrataCore	Borehole Diameter (in.):	2.25		
	1	Frisco, 1	1.		Driller:		Mario Robles	Total Depth (ft):	2		
					Driller's L	icense:	52694	Northing:	7102377.15		
	PRW F	roject N	lo. 1755		Logged By:		Christopher Moore, P.G.	Easting:	2479500.79		
	. 5	.0,000.			Sampling Method: 2"x 4' Barrel Ground Elev. (ft AMSL):			**			
Depth (ft)	Recovery (ff/ff)	OID (mpm)	Sample Intervai	USCS	-		Des	ologic cription			
0					(0 - 0.9) SILTY CLAY, CL, light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.  (0.9 - 2.0) SILTY CLAY, CL, grayish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor.						
1	2.0/2.0	0	0-2								

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Notes:
Boring location hand probed to 3,0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exic	de Te	chnol	ogies		l	_og of Boring	j: 2012-BY-2			
	***************************************		***************************************		Completion Date:		1/4/2012	Drilling Method:	Geoprobe		
			g Cente	r	Drilling Company:		StrataCore	Borehole Diameter (in.):	2.25		
		Frisco, 7	ΓX		Driller:		Mario Robles	Total Depth (ft):	2		
<b></b>					Driller's Li	icense:	52694	Northing:	7102343.16		
	DRW E	Project N	lo 1755		Logged B			2479613.26			
	PBW Project No. 1755 Logged Sampli						2"x 4' Barrel	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (ft/ft)	OID (mdd)	Sample Interval	USÇS			Des	nologic cription			
1 ~	2.0/2.0	0	0-2	œ.	(0 - 2.0) SILTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.9: black plastic fragment (approximately 0.5 in x 1 ln x 1/8 in thick)						

PBW

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Boring location hand probed to 2.5 feet to check for ultities. Borshole plugged with bentonite chips upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exic	de Te	chnol	ogles		Log of Boring: 2012-BY-3					
					Completion Date:		1/4/2012	Drilling Method:	Geoprobe		
			g Center	r	Drilling Company:		StrataCore	Borehole Diameter (in.):	2.25		
1	l	Frisco, 1	ΓX		Driller:		Mario Robles	Total Depth (ft):	2		
					Driller's !	License:	52694	Northing:	7102238.79		
	PBW Project No. 1755						Christopher Moore, P.G.	Easting:	2479660.34		
1	PBW Project No. 1755 Esamp						2"x 4' Barrel	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (ff/ff)	Oid (mdd)	Sample Interval	uscs	<u>,                                     </u>		Des	nologic cription	-		
1 -		0	0-2	60	(0 - 2.0) SILTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.9: gravel size slag fragment (black and oxidized orange, hard dense, porus)						

## **PBW**

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Notes:
Boring location hand probed to 2.5 feet to check for utilities.
Borehole plugged with bantonite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Borin	g: 2012-BY-4	,			
	······································				Completion Date	: 1/4/2012	Drilling Method:	Geoprobe			
			ıg Cente	Γ	Drilling Company	: StrataCore	Borehole Diameter (in.):	2.25			
		Frisco,	IX		Driller:	Mario Robles	Total Depth (ft):	2			
					Driller's License:	52694	Northing:	7102230.77			
	PBW F	roiect N	lo. 1755		Logged By:	Christopher Moore, P.G.	Easting:	2479578.92			
		, -,			Sampling Metho	Sampling Method: 2"x 4' Barrel Ground Elev. (ft AMSL): -					
Depth (ft)	Recovery (fl/ft)	Old (mdd)	Sample Interval	USCS			thologic escription				
1	2.0/2.0	0	0-2	g.C	(0 - 2.0) SiLTY CLAY, CL, mottled very dark gray and light yellowish brown, moist, firm medium plasticity, some sand size carbonate nodules, no staining or foreign material observed to 1.9, no odor. 1.2: gravel. 1.7-1.9: gravel, 1.9: gravel size slag fragment (bl and oxidized orange, hard, dense, porous)						

# PBW

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Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borehole plugged with bentonits chips upon completion.
This Log of Boring should not be used seperately from the report to which it is attached.

	Exic	de Te	chnol	ogies		Log of Boring: 2012-BY-5				
					Completion Date:		1/4/2012	Drilling Method:	Geoprobe	
			g Cente	r	Drilling Company:		StrataCore	Borehole Diameter (in.):	2.25	
		Frisco, 1	ГХ		Driller:	······································	Mario Robles	Total Depth (ft):	2	
	**************************************	··········			Driller's I	icense:	52694	Northing:	7102282.36	
	PBW Project No. 1755 Logge						Christopher Moore, P.G.	Easting:	2479515.5369	
	1 044 1 10 000 1100 1100					Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	**	
Depth (ft)	Recovery (ft/ft)	Old (mdd)	Sample Interval	uscs			Des	ologic cription		
1 -	2.0/2.0	0	0-2	cine);	(0 - 2.0) SILTY CLAY, CL, very dark gray, moist, firm, medium plasticity, some sand carbonate nodules, no staining or foreign material observed to 1.9, по odor.					

PBW

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Notes:
Bering location hand probed to 3.0 feet to check for utilities.
Borehole plugged with benforite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-BY-4					
Frisco Recycling Center Completic						3/5/2013	Drilling Method:	DPT			
				Γ	Driller:	Margarito Estrada	Borehole Diameter (in.):	2			
		Frisco, 1	^		Driller's License:	58164	Total Depth (ft):	2			
		WWW.			Field Supervisor:	Tim Jennings, P.G.	Northing:	7102230.7699			
	PRW I	Project N	o. 1755		Logged By:	Roberta Russell	Easting:	2479578.9168			
			,		Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs			Lithologic Descriptio	on .				
0 1	2/2	The state of the s	FILL		(0 - 1.5) FILL, clayey silt, light yellowish brown, moist, hard, low plasticity.  (1.5 - 2.0) FILL, abundant slag, gravel with silt and clay, dry, firm.						

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Borehole plugged with bentonite chips upon completion.



### LOG OF 2013-C2L-01

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1430

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 15 FT BGS

RIG: Geoprobe

NORTHING: 7,103,855 FT

EASTING: 2,480,668 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
1	1	,	<u>5.0</u> 5.0	0.0-0.5 (1435) 1-2 (1436)	СН		0-3.0 FT, (CH) CLAY; dark brown; dry, stiff.
- - -5				4-5 - (1437)	ML		3.0-4.5 FT, (ML) CLAYEY SILT; reddish brown, friable, platy; dry, hard.  4.5-13.5 FT, (CH) CLAY; gray, reddish brown and yellow mottling, some friable clay; dry, hard.
_	2	NA	<u>5.0</u> 5.0		СН		
- 10 - - -	3		<u>5.0</u> 5.0	10-12 (1440) 12-13 (1441)			13.5-15 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.
- 15 - -				(1442)			End of borehole at 15 FT BGS (REFUSAL)
						D/	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

## LOG OF 2013-C2L-02

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1130

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,459 FT EASTING: 2,480,901 FT

TOTAL DEPTH: 18 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS					
(1.001)		(( )	(1.001)	0.0-0.5 (1138)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; brown; dry, firm-stiff.					
			5.0	1-2 (1139)	CL		1.0-2.5 FT, (CL) SILTY CLAY; brown/black, layered; dry, firm.					
_ _ 5	1		<u>5.0</u> 5.0	5.0	5.0	5.0 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0	4-5 - (1140)	СН	СН	2.5-7.0 FT, (CH) CLAY; black; dry, stiff.
-				-								
- 10	2	NA	<u>5.0</u> 5.0				7.0-13.5 FT, (CH) CLAY; gray/reddish brown, yellowish mottling; dry, hard.					
-	3		<u>5.0</u> 5.0		СН							
15					ML		13.5-14.0 FT, (ML) CLAYEY SILT, some sand; red, gray mottling; wet, soft-firm. 14.0-18.0 FT, SHALE; dark gray, reddish brown and yellow mottling; hard.					
<u>-</u> 15	4		<u>3.0</u> 3.0									
							End of borehole at 18 FT BGS (REFUSAL)					

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
	Class 2 Landfill	REVIEWED BY:	WL

### LOG OF 2013-C2L-03

DRILLING METHOD: Direct Push

DATE/TIME: 01/09/14, 1130

DRILLER: \_\_\_SCI, Margarito Estrada

TOTAL DEPTH: 23.5 FT BGS

RIG: Geoprobe

NORTHING: 7,103,191 FT

EASTING: 2,480,793 FT

	DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					0.5-1.0	СН		0-1.0 FT, (CH) CLAY; dark brown; dry, soft.
-		1		<u>4.5</u> 5.0	2-4 (1127)	СН		1.0-5.0 FT, (CH) CLAY; brown, orange mottling, trace calcareous nodules; dry, stiff.  4.0 FT, gray, yellow mottling.
	_				4-5			
	- 5	2		<u>5.0</u> 5.0	. (1128)			5.0-17.5 FT, (CH) CLAY; gray, red and yellow mottling, friable, trace calcareous nodules; dry, stiff.
	-10	3	NA	<u>5.0</u> 5.0		СН		
		4		<u>5.0</u> 5.0				
F		,		5.0		CL		17.5-18.0 FT, (CL) SILTY CLAY; red, yellowish mottling, friable; dry, firm.  18.0-22.0 FT, (CH) CLAY; gray, red and yellow mottling, friable; dry, stiff.
-	A					СН		

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



### LOG OF 2013-C2L-03

DRILLING METHOD: Direct Push

NORTHING: 7,103,191 FT

DATE/TIME: 01/09/14, 1130

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,793 FT

TOTAL DEPTH: 23.5 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(i oss)	5	NA NA	3.5 3.5		СН		18.0-22.0 FT, (CH) CLAY; gray, red and yellow mottling, friable; dry, stiff. (Continued) 20.0 FT, reddish mottling; hard.
			0.0				22.0-23.5 FT, SHALE; dark gray, reddish yellow mottling; hard, dry.
_ 25 							End of borehole at 23.5 FT BGS (REFUSAL)  Boring was completed to 20.0 FT BGS on 01/09/14 with track mounted Geoprobe rig. To reach total depth, a truck mounted Geoprobe was used to complete the boring to 23.5 FT BGS on 01/14/14.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

## LOG OF 2013-C2L-04

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1015

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 22.5 FT BGS

RIG: Geoprobe

NORTHING: 7,103,041 FT

EASTING: 2,480,728 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS			
				0.0-0.5	СН		0-0.5 FT, (CH) CLAY, trace fine gravel; black; dry, firm.			
				(1024) 1-2 (1025)	CL/GC		0.5-2.0 FT, (CL/GC) GRAVELLY CLAY; brown, black, reddish and white mottling; dry, firm.			
_	1		<u>5.0</u> 5.0	(1023)			2.0-6.0 FT, (CH) CLAY; dark brown; dry, very stiff.			
-				4-5	СН		4.0 FT, some fine gravel			
- 5			ga	(1026)			6.0-8.0 FT, (CL/GC) GRAVELLY CLAY, some silt; light brown; dry, stiff.			
	2		<u>5.0</u> 5.0		CL/GC	6	6.25-6.5 FT, silty gravel; compact.			
		NA NA			СН		8.0-10.0 FT, (CH) CLAY, trace fine gravel; brown; dry, very stiff.			
- 10 - -	3	IVA	<u>5.0</u>				10.0-19.0 FT, (CL/GC) GRAVELLY CLAY, some silt; brown, gray and reddish mottling, calcareous nodules; dry, stiff.			
_ 			5.0 5.0 5.0		5.0	5.0		CL/GC	GC G	
-	4				8					
_					СН		19.0-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.			

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



### LOG OF 2013-C2L-04

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,728 FT

DATE/TIME: 01/14/2014, 1015
TOTAL DEPTH: 22.5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

NORTHING: 7,103,041 FT

	I					1	
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
			, , , , , , , , , , , , , , , , , , , ,			////	19.0-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard. (Continued)
		٠					(Continuea)
-	5	NA	<u>2.5</u> 2.5		СН		
			2.5				
<u> </u>							22.0-22.5 FT, SHALE; dark gray, reddish brown mottling; dry, hard.
							End of borehole at 22.5 FT BGS (REFUSAL)
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

# Golder Associates

## LOG OF 2013-C2L-05

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 0815

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,082 FT EASTING: 2,480,098 FT

TOTAL DEPTH: 23 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		,		0.0-0.5	CL		0-0.75 FT, (CL) SILTY CLAY; gray, yellowish mottling; dry, stiff.
-5	1	<u>5.0</u> 5.0	(0818) 1-2 (0819) 4-5 (0820)	СН		0.75-9.0 FT, (CH) CLAY; black, trace calcareous nodules; dry, stiff-very stiff.  5.0 FT, trace fine gravel.	
-3				(0020)			6.0 FT, brown; dry, very stiff.
-	2	5.0 5.0 5.0 5.0	<u>5.0</u> 5.0				9.0-10.0 FT, (CL/GC) GRAVELLY CLAY; gray and brown, black and white
				CL/GC		mottling; dry, hard.	
- 10 -			5.0		СН		10.0-12.5 FT, (CH) CLAY, trace fine gravel; gray and brown, black and white mottling; dry, very stiff.
	3		5.0			ML/GM	
					CL/GC		14.0-15.0 FT, (CL/GC) GRAVELLY CLAY, and gravel at 14.75-15 FT; light brown and tan; dry, firm.
- 15	4		<u>5.0</u> 5.0		CL/GC		15.0-20.0 FT, (CL/GC) CLAY and GRAVEL; light brown and tan; dry, firm.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



### LOG OF 2013-C2L-05

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 0815

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 23 FT BGS

RIG: Geoprobe

NORTHING: 7,103,082 FT

EASTING: 2,480,098 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					CL		20.0-21.0 FT, (CL) SILTY CLAY; brown and black; wet, soft.
	5	NA	3.0 3.0		***************************************		21.0-23.0 FT, SHALE; dark gray, reddish yellow mottling; dry, hard.
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				,			End of borehole at 23 FT BGS (REFUSAL)
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

### LOG OF 2013-C2L-06

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1245

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,315 FT EASTING: 2,480,135 FT

TOTAL DEPTH: 24 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS						
-	1		4.5 5.0							0.0-0.5 (1255) 1-2 (1256)	CL		0-3.0 FT, (CL) CLAY, some silt, some gravel; brown; dry, firm-stiff.  3.0-9.75 FT, (CH) CLAY; black; dry, very stiff.
5				4-5 - (1257)			S.U-9.73 FT, (CH) CLAT, black, dry, very Still.						
-	2		<u>5.0</u> 5.0		СН								
<del>-</del> 10		NA -			CL/GC		9.75-11.0 FT, (CL/GC) GRAVELLY CLAY; brown and gray, calcareous nodules; dry, hard.						
_	3		<u>5.0</u> 5.0		СН		11.0-13.5 FT, (CH) CLAY, trace fine gravel; brown; dry, stiff.						
_ _ 15		5.0			ML		13.5-16.5 FT, (ML) CLAYEY SILT; brown; moist, soft.						
	4		<u>5.0</u> 5.0		ML/GM		16.5-16.8 FT, CALCITE; coarsely crystalline; white. 16.8-18.5 FT, (ML/GM) CLAYEY SILT and GRAVEL; brown; dry, stiff.						
					СН		18.5-20.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.						

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

### LOG OF 2013-C2L-06

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1245

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,315 FT EASTING: 2,480,135 FT

TOTAL DEPTH: 24 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	5	NA	4.0 4.0		СН		20.0-22.5 FT, (CH) CLAY, some gravel; brown; very stiff.
-					СН	272	22.5-22.75 FT, CALCITE; coarsely crystalline; white. 22.75-23.0 FT, (CH) CLAY, some gravel; brown; very stiff.
							23.0-24.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.
-							End of borehole at 24 FT BGS (REFUSAL)
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

### LOG OF 2014-C2L-06A

DRILLING METHOD: Direct Push

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NORTHING: 7,103,401 FT

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,137 FT

DATE/TIME: 03/31/2014, 0845
TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 650 FT AMSL

		311103		1110	Geoplob	T	OUNTAGE ELEVATION. GOVERNMEN
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-				0.0-0.5 (0847) 0.5-2.0	CL		0.0-1.5 FT, (CL) CLAY, some silt, trace gravel; brown, trace white calcareous nodules; dry, firm-stiff.
_	1	N/A	<u>3.8</u> 5.0	(0848)			1.5-5.0 FT, (CH) CLAY; dark brown; dry, firm.
				2.0-4.0 (0849)	СН		
5							End of borehole at 5 FT BGS
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PROJECT No:_	130-2086	COMPILED BY:	BEF .
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

Golder	
Associates	

### LOG OF 2014-C2L-06B

DRILLING METHOD: Direct Push

DATE/TIME: 03/31/2014, 0900

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,058 FT

NORTHING: 7,103,303 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 659 FT AMSL

	DEF 111.	,		,	Geoplob		OUNT ACE ELEVATION: 03311 AIVIGE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_			·	0.0-0.5 (0909) 0.5-2.0 (0910)	GP/SP	。 ) 。 。	0.0-2.0 FT, (GP/SP) GRAVELLY SAND; light brown and gray; dry, loose.
_	1	N/A	<u>3.0</u> 5.0	2.0-4.0 (0911)	СН		2.0-4.0 FT, (CH) CLAY; dark brown and black; dry, firm.
-							4.0-5.0 FT, Not Logged.
-5 -							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



### LOG OF 2014-C2L-06C

DRILLING METHOD: Direct Push

51 (122) 10 (112) 11 (103) <u>11 (103)</u>

NORTHING: 7,103,214 FT

DATE/TIME: 03/31/2014, 0930

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,124 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 650 FT AMSL

DEPTH   RUN   (Feet)   REC   (Feet	
2.0-4.0 (0932)  CL  3.0-4.0 FT, (CL) CLAY, some silt and gravel; brown, reddish yel trace white calcareous nodules, trace carbon nodules; dry, firm.  4.0-5.0 FT, Not Logged.  End of borehole at 5 FT BGS	illow mottling, n.
End of borehole at 5 FT BGS	ellow mottling, n.
- 10	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

# Golder ssociates

DATE/TIME: 01/14/2014, 1330

#### LOG OF 2013-C2L-07

DRILLING METHOD: Direct Push

NORTHING: 7,103,532 FT EASTING: 2,480,172 FT

DRILLER: SCI, Margarito Estrada

SURFACE ELEVATION: N/A

TOTAL DEPTH: 18 FT BGS RIG: Geoprobe DEPTH RUN PID REC GRAPHIC LOG SAMPLE USCS DESCRIPTION AND COMMENTS (Feet) (PPM) (Feet) No. 0-1.5 FT, (CL) CLAY, some silt, trace fine gravel; brown; dry, firm. 0.0-0.5 (1328) CL 1-2 (1329) 1.5-7.5 FT, (CH) CLAY; black; dry, stiff-very stiff. <u>5.0</u> 5.0 1 СН 4-5 (1330) - 5 <u>5.0</u> 5.0 2 7.5-17.5 FT, (CH) CLAY; gray, reddish brown and yellow mottling, interbedded friable layers; dry, hard. NA - 10 5.0 5.0 CH 3 - 15 3.0 3.0 4 17.5-18.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard. End of borehole at 18 FT BGS (REFUSAL)

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

# Golder

DATE/TIME: 01/14/2014, 1400

TOTAL DEPTH: 20 FT BGS

## LOG OF 2013-C2L-08

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

RIG: Geoprobe

NORTHING: 7,103,900 FT

EASTING: 2,480,452 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		, , , , ,		0.0-0.5 (1405)	СН		0-1.0 FT, (CH) CLAY; brown; dry, firm-stiff.
	1		4.0 5.0	1-2 (1406)	ML/GM		1.0-3.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; light gray and brown; firm.
-5				4-5 (1407)	СН		3.0-5.5 FT, (CH) CLAY; dark brown; dry, very stiff.
-	2		<u>4.0</u> 4.0				5.5-19.0 FT, (CH) CLAY; gray, reddish brown and yellow mottling; dry, hard.
10	3	NA	3.0 3.0				
- - 15	4	<u>4.0</u> 4.0		СН			
	5		<u>4.0</u> 4.0	15-17 (1416) 17-18 (1417)			
				18-20 (1418)		200 200 200 200 200 200 200 200 200 200	19.0-20.0 FT, SHALE; dark gray, reddish brown and yellow mottling; dry, hard.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,900 FT EASTING: 2,480,452 FT

DATE/TIME: 01/14/2014, 1400 TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
							End of borehole at 20 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: Direct Push

NORTHING: 7,103,008 FT

DATE/TIME: 01/14/2014, 0945

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,517 FT

TOTAL DEPTH: 22.5 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS						
				0.0-0.5 (0945)	CL		0-1.0 FT, (CL) CLAY, some gravel; brown; dry, firm-stiff.						
-	1		5.0 5.0	5.0 5.0	(0946)	сн		1.0-7.5 FT, (CH) CLAY; dark brown; dry, very stiff-hard.					
-	2			(0347)									
	2		<u>5.0</u> 5.0		CL/GC		7.5-8.0 FT, (CL/GC) CLAY and GRAVEL; light gray and brown, friable; dry, compact.						
_ _ 10		NA			CL		8.0-11.5 FT, (CL) SILTY CLAY, some gravel; brown, white mottling; dry, very stiff.						
							11.25 FT, and gravel for 0.25 FT 11.5-14.5 FT, (CL) CLAY, some silt; brown; dry, firm.						
-	3		<u>5.0</u> 5.0		N						CL		13.5 FT, and silty gravel for 0.25 FT
15 						ML/GM		14.5-17.25 FT, (ML/GM) GRAVELLY SILT, some clay; light brown and tan; dry, soft-firm.					
_	4		<u>5.0</u> 5.0		CL		17.25-19.5 FT, (CL) CLAY, trace gravel; brown and tan; dry, stiff.						
					СН		19.5-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard.						

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: Direct Push

NORTHING: 7,103,008 FT

DATE/TIME: 01/14/2014, 0945

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,517 FT

TOTAL DEPTH: 22.5 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	5	NA	<u>2.5</u> 2.5		СН		19.5-22.0 FT, (CH) CLAY; gray, reddish brown mottling; dry, hard. (Continued)  22.0-22.5 FT, SHALE; dark gray, reddish brown mottling; dry, hard.
							End of borehole at 22.5 FT BGS (REFUSAL)
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

DRILLING METHOD: Direct Push

NORTHING: 7,103,062 FT

DATE/TIME: 01/14/2014, 0900

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,295 FT

TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (0906) 1-2 (0907)	CL/GC		0-2.0 FT, (CL/GC) GRAVELLY CLAY; brown, black mottling; dry, firm.
.5	1		<u>4.3</u> 5.0	4-5 - (0908)	СН	2.0-7.5 FT, (CH) CLAY, black; dry, stiff.	
J	2		5.0 5.0 5.0 5.0				·
	2				CL		7.5-9.0 FT, (CL) CLAY, some fine gravel; brown; dry, very stiff.
10		. NA		_	CL/GC		9.0-11.0 FT, (CL/GC) GRAVELLY CLAY; gray and brown, black and white mottling; dry, hard.
	3			<u>5.0</u> 5.0	ML/GM		11.0-14.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; light brown/tan; dry, soft-firm.
15					СН		14.0-19.0 FT, (CH) CLAY; gray, reddish mottling; dry, hard.
	4		<u>5.0</u> 5.0				
							19.0-20.0 FT, SHALE; dark gray, reddish yellow mottling, fissile; dry, hard.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,103,062 FT EASTING: 2,480,295 FT

DATE/TIME: 01/14/2014, 0900
TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe

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	DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
		1						End of borehole at 20 FT BGS (REFUSAL)
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



#### LOG OF 2014-C2L-CO1A

DRILLING METHOD: Hand Auger

NORTHING: 7,103,242 FT

DATE/TIME: 04/04/2014, 1330

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,193 FT

TOTAL DEPTH: 1 FT BGS

RIG: Hand Auger

SURFACE ELEVATION: 656 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1	N/A	1.0 1.0	0-1 (1325)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
-							End of borehole at 1 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

# Golder

#### LOG OF 2014-C2L-CO1B

DRILLING METHOD: Hand Auger

NORTHING: 7,103,200 FT

DATE/TIME: 04/04/2014, 1345

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,225 FT

TOTAL DEPTH: 1 FT BGS

RIG: Hand Auger

SURFACE ELEVATION: 656 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1	N/A	1.0 1.0	0-1 (1338)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
-							End of borehole at 1 FT BGS
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PROJECT NO:	130-2086	COMPILED BY.	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	WL



#### LOG OF 2014-C2L-CO1C

DRILLING METHOD: Hand Auger

NORTHING: 7,103,137 FT

DATE/TIME: 04/04/2014, 1330

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,206 FT

TOTAL DEPTH: 1 FT BGS

RIG: Hand Auger

SURFACE ELEVATION: 655 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
	1	N/A	<u>1.0</u> 1.0	0-1 (1333)	CL		0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; light brown/orange; dry, soft to firm.
						7 17 17 17	End of borehole at 1 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW

	Exic	de Te	chnol	ogies		Log of Boring	g: 2012-CUF	T-1		
				***************************************	Completion Date:	1/6/2012	Drilling Method:	Geoprobe		
			g Cente	r	Drilling Company:	StrataCore	Borehole Diameter (in.):	2.25		
	· I	Frisco, 7	ΓX		Driller:	Mario Robles	Total Depth (ft):	4		
-					Driller's License:	52894	Northing:	7101785.23		
	PRW/P	roject N	lo. 1755		Logged By:	Christopher Moore, P.G.	Easting:	2479393.50		
	1 544 1	10,00011			Sampling Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (ft/ft)	Soil pH	Sample Interval	uscs	Lithologic Description					
1 -		6.5	0-2		(0 - 1.6) SiLTY CLAY, CL. grayish brown, moist, soft, medium plasticity, no staining observed, no odor. 0-0.3: fine sand lenses, fill. 1.3: angular gravel fragment.					
2	3.5/4.0				(1.6 - 4.0) SILTY CLAY, CL, very dark gray, moist, firm medium plasticity, some oxidized lenses, trace sand size carbonate nodules, no foreign material observed, no odor.					
3		6.82								

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Porting location hand probed to 4.0 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used separately from the report to which it is sitteched.

	Exic	de Te	chnol	ogies		I	₋og of Borir	ng: 2012-CUF	Т-2	
	<del>,</del>			<del></del>	Completi	on Date:	1/6/2012	Drilling Method:	Geoprobe	
1			ng Cente	r	Drilling C	ompany:	StrataCore	Borehole Diameter (in.):	2.25	
		Frisco, "	IX		Driller:		Mario Robles	Total Depth (ft):	4	
			***************************************		Driller's L	icense:	52694	Northing:	7101782.80	
	PBW F	rolect N	lo. 1755		Logged E	Зу:	Christopher Moore, P.G	. Easting:	2479434.31	
		,501 .			Sampling	Method:	2"x 4' Barrel	Ground Elev. (ft AMSL)		
Depth (ft)	Recovery (fl/fl)	Soil pH	Sample Interval		Lithologic Description					
1		6.38	0-2		(0 - 2.1) SILTY CLAY, CL, yellowish brown and very dark gray, moist, soft to firm, medium plasticity, trace angular carbonate gravel (possible fill or reworked material), no staining observed, no odor					
3	4.0/4.0	6.32			(2.1 - 4.0) SILTY CLAY, CL, very dark gray, moist, firm medium plasticity, some oxidized lenses, trace sand size carbonate nodules, no foreign material observed, no odor.					

PBW

Pastor, Behling & Wheeler, LLC
2201 Double Creek Dr., Suite 4004
Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Boring location hand probed to 4,5 feet to check for utilities.
Borehole plugged with benionite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2013-CUFT-3 **Exide Technologies** 3/4/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: Northing: Will Vienne, P.G. 7101737.6536 Field Supervisor: Logged By: Will Vienne, P.G. Easting: 2479344.9752 PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Lithologic (#J#) Depth Sample USCS Description Interval (ft) (0 - 5.0) CLAY, dark brownish gray, abundant limestone pebbles in clay matrix at 0-0.6', trace limestone granules below 0.6', white precipitate like substance at surface, moist 0-0.6', soft to 0 0 - 0.5 slightly firm, low to medium plasticity. 1 0.5 - 22 4.5/5 2 - 4 3 4 4 - 5

# **PBW**

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Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-CUFT-4 **Exide Technologies** Completion Date: 3/4/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: Will Vienne, P.G. Northing: 7101888.98 Field Supervisor: Logged By: Will Vienne, P.G. Easting: 2479303.0138 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample uscs (ft) Interval Description (0 - 5.0) CLAY, dark gray, trace limestone granules, moderately abundant decayed plant fragments, wet at 0-0.5', moist below 0.5', soft, low plasticity. Ö 0 - 0.5 1 0.5 - 22 4.6/5 2 - 4 3 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-CUFT-5 **Exide Technologies** 3/4/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Margarito Estrada Frisco, TX 58164 Driller's License: Total Depth (ft): Will Vienne, P.G. 7101906.1421 Field Supervisor: Northing: Logged By: Will Vienne, P.G. Easting: 2479178.0231 PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Recovery (ft/ft) Lithologic Depth Sample uscs Description (ft) Interval (0 - 5.0) Silty CLAY, v. dark gray, abundant limestone granules, moderately abundant decayed plant material, moist, soft to slightly firm, low plasticity. 0 0 - 0.5 1 0.5 - 2 2 4.7/5 2 - 4 3 4 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

## LOG OF 2013-CUFT-5A

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,932 FT EASTING: 2,479,179 FT

DATE/TIME: 01/10/2014, 0945
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

	RUN	PID	REC (Feet)		LICCO	GRAPHIC LOG	DESCRIPTION AND COMMENTS
DEPTH (Feet)	No.	PID (PPM)	(Feet)	SAMPLE	USCS ML/SM	•	DESCRIPTION AND COMMENTS  0-0.3 FT (ML/SM) GRAVELLY SILT and SAND; day compact
-	1	NA	<u>4.0</u> 4.0	0.0-0.5 (0943)	CH		0-0.3 FT, (ML/SM) GRAVELLY SILT and SAND; dry, compact. 0.3-4.0 FT, (CH) CLAY; dark brown; dry, firm-stiff.
-5							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	<u> </u>
PROJECT:	Exide Frisco	CHECKED BY:	רמך
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

## **LOG OF 2013-CUFT-5B**

DRILLING METHOD: Direct Push

NORTHING: 7,101,932 FT

DATE/TIME: 01/10/2014, 0945

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,173 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		, ,		0.0-0.5 (0940)	CL		0-1.0 FT, (CL) SILTY CLAY, some gravel; moist, firm.
	1	NA	<u>4.0</u> 4.0		СН		1.0-4.0 FT, (CH) CLAY; dark brown and black; dry, firm.
-5							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	865	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ .	
LOCATION:	Crystallizer Area	REVIEWED BY:	JW	

Golder
Associates

## LOG OF 2014-CUFT-5B-A

DRILLING METHOD: Direct Push

NORTHING: 7,101,909 FT

DATE/TIME: 04/04/2014, 1045

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,204 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 628 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
_		-	, ,	0-0.5 (1054)	CL		0-1.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
-	1	N/A	<u>3.3</u> 4.0	0.5-2 (1055) 2-4 (1056)	СН		1.0-4.0 FT, (CH) CLAY; dark brown/black; dry, soft to firm.
-5							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	WL

Golder
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## **LOG OF 2013-CUFT-5C**

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,891 FT

EASTING: 2,479,181 FT

DATE/TIME: 01/10/2014, 1045

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 001)	110.	(1 1 1 1 1 )	(1 001)	0.0.0.5			0-4.0 FT, (CH) CLAY; black; dry, stiff.
				0.0-0.5 (1051)			
	1	NA	4.0		СН		
_		INA	4.0 4.0		СП		
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							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	 COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



## LOG OF 2013-CUFT-5D

DRILLING METHOD: Direct Push

NORTHING: 7,101,927 FT

DATE/TIME: 01/10/2014, 1000

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,186 FT

TOTAL DEPTH: 12 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1	<i>(,</i>	3.8 4.0	0.0-0.5 (0952) 2-4 (0953)	CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; brown; moist, soft.  1.0-12.0 FT, (CH) CLAY; dark brown; dry, firm.
5 	2	NA	<u>4.0</u> 4.0	4-6 (0954) 6-8 (0955)	СН		4.0 FT, stiff.
- 10	3		4.0 4.0	8-10 (0956)			
- - 15 -							End of borehole at 12 FT BGS
_						The second secon	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

#### Log of Boring: 2013-CUFT-6 **Exide Technologies** Completion Date: 3/4/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7101910.6793 Northing: Field Supervisor: Logged By: Will Vienne, P.G. Easting: 2479083.0433 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample uscs (ft) Interval Description (0 - 5.0) Slity CLAY, dark gray, trace limestone granules, moderately abundant decayed plant material, moist, soft, low to medium plasticity. Ō 0 - 0.5 1 0.5 - 2 2 4.3/5 2 - 4 3 4 5

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

Golder
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## LOG OF 2013-CUFT-6A

DRILLING METHOD: Direct Push

NORTHING: 7,101,924 FT

DATE/TIME: 01/10/2014, 1015

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,078 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5	ML	711 711	
				0.0-0.5 (1014)	ML/GM		0.5-1.0 FT, (ML/GM) CLAYEY SILT and GRAVEL; brown and gray; dry, soft.
_	1	NA	<u>4.0</u> 4.0		СН		1.0-4.0 FT, (CH) CLAY; black; dry, stiff.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

Golder
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## LOG OF 2013-CUFT-6B

DRILLING METHOD: Direct Push

DATE/TIME: 01/10/2014, 1045

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,895 FT EASTING: 2,479,080 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS	
(1 33.7	140.	(1.1.101)	(i ddi)	0.0-0.5 (1041)			0-4.0 FT, (CH) CLAY; black; dry, stiff.	
	1	NA	<u>4.0</u> 4.0		СН			
_			N.				End of borehole at 4 FT BGS	
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PROJECT NO:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



## **LOG OF 2013-CUFT-6C**

DRILLING METHOD: Direct Push

NORTHING: 7,101,934 FT

DATE/TIME: 01/10/2014, 1030

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,082 FT

TOTAL DEPTH: 12 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS	
-	1	((110))	2.3 4.0	0.0-0.5 (1022) 2-4 (1023)			0-12.0 FT, (CH) CLAY; dark brown and black; dry, soft.	
- 5	2	NA	<u>4.0</u> 4.0	4-6 (1024) 6-8 (1025)	СН		6.0 FT, stiff. 8.0 FT, black.	
10	3		4.0 4.0	8-10 (1026)				
- - 15		er mende					End of borehole at 12 FT BGS	
_							· .	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

#### Log of Boring: 2013-CUFT-7 **Exide Technologies** Completion Date: 3/4/2013 Drilling Method: DPT Frisco Recycling Center Frisco, TX Borehole Diameter (in.): 2 Margarito Estrada Driller: Driller's License: 58164 Total Depth (ft): 7101923.4133 Field Supervisor: Will Vienne, P.G. Northing: 2478975.0661 Will Vienne, P.G. Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample USCS Interval Description (ft) (0 - 5.0) Silty CLAY, slightly sandy at 0-0.4', dark gray, slightly moist, soft at 0-1.8', firm below 1.8', 0 0 - 0.5 low plasticity. 0.5 - 22 5/5 3 2 - 4 4 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-CUFT-7A **Exide Technologies** Drilling Method: DPT Completion Date: 3/7/2013 Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Total Depth (ft): Driller's License: 58164 7101907.9099 Tim Jennings, P.G. Northing: Field Supervisor: Roberta Russell Easting: 2478965.4179 Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Lithologic Depth Sample USCS Interval Description (ft) (0 - 5.0) Sitty CLAY/CLAY, dark reddish brown, moist, firm, low to medium plasticity. 0 0 - 0.5 1 0.5 - 2 2 4.8/5 3 2 - 4 4 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

# Golder Associates

## **LOG OF 2013-CUFT-7B**

DRILLING METHOD: Direct Push

NORTHING: 7,101,932 FT

DATE/TIME: 01/10/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,970 FT

TOTAL DEPTH: 10 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1108)	ML		0-1.0 FT, (ML) CLAYEY SILT, some gravel; dark brown; moist, soft.
-	. 1		<u>3.3</u> 4.0		·		1.0-10.0 FT, (CH) CLAY, trace fine gravel; black, red mottling; dry, stiff.
-				2-4 (1109)			
-5		NA		4-6 (1110)			
-	2		4.0 4.0	(1110)	СН		
				6-8 (1111)			
-	3		<u>2.0</u> 2.0	8-10 (1112)			9.0 FT, grayish mottling, friable.
– 10 -							End of borehole at 10 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

#### Log of Boring: 2013-CUFT-8 **Exide Technologies** DPT 3/4/2013 Drilling Method: Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: 7101684.4603 Will Vienne, P.G. Northing: Field Supervisor: 2479346.4925 Logged By: Will Vienne, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Lithologic Depth Sample uscs Description Interval (ft) (0 - 5.0) Silty CLAY, grayish brown, moderate to abundant limestone granules throughout, firm, shale fragments at 2.8-3.2', soft and moist at 0-0.9', dry and firm below 0.9', low plasticity. 0 0 - 0.5 1 0.5 - 2 2 5/5 3 2 - 4 4 4 - 5 5

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-CUFT-10 **Exide Technologies** Completion Date: Drilling Method: DPT 3/7/2013 Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): 7101931.4899 Northing: Tim Jennings, P.G. Field Supervisor: Easting: Roberta Russell 2478954.0769 Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (fuff) Lithologic Depth Sample uscs Interval Description (ft) (0 - 0.5) FILL, clayey silt w/gravel, dark brown, ~10% medium gravel, battery chip at 0.5°, moist, 0 FÚL. 0 - 0.5 soft, low plasticity silt. (0.5 - 5.0) SILTY CLAY, moist, firm, low to medium plasticity. 1 0.5 - 2 2 4.4/5 2 - 4 3 4 4 - 5 5

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

# Golder Associates

#### **LOG OF 2013-CUFT-10A**

DRILLING METHOD: Direct Push

NORTHING: 7,101,955 FT

DATE/TIME: 01/10/2014, 1145

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,944 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		,		0.0-0.5	ML	11/2 /11/	0-0.5 FT, TOPSOIL (ML) CLAYEY SILT; brown; moist, soft.
	1	NA NA	<u>2.5</u> 4.0	0.0-0.5 (1141)	CH/CL		0.5-4.0 FT, (CH/CL) CLAY and SILTY CLAY, trace fine gravel; black; moist, firm.
						<u> </u>	End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



## **LOG OF 2013-CUFT-10B**

DRILLING METHOD: Direct Push

NORTHING: 7,101,949 FT

DATE/TIME: 01/10/2014, 1145

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,928 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

M. D.O-0.5 (1148)  1 NA 3.5 (1148)  1 NA 3.5 (1148)  CHVCL  End of borehole at 4 FT BGS  End of borehole at 4 FT BGS	DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
1 NA 3.5 (1148)  1 NA 3.5 (1148)  CH/CL  End of borehole at 4 FT BGS	(. 55.)		\	(, 500)	0.0-0.5	ML		0-0.5 FT, (ML) CLAYEY SILT, trace gravel; dark brown; moist, soft.
-5	_	1	NA	<u>3.5</u> 4.0	(1148)			
								End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



## LOG OF 2013-CUFT-10C

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,917 FT

EASTING: 2,478,953 FT

DATE/TIME: 01/10/2014, 1200

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5	ML	717 711	0-0.5 FT, TOPSOIL (ML) CLAYEY SILT; dark brown; damp, soft.
-	1	NA	<u>3.3</u> 4.0	0.0-0.5 (1155)	СН		0.5-4.0 FT, (CH) CLAY; dark brown, trace reddish mottling; damp, soft-firm.
-5 - -							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF .
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



## **LOG OF 2013-CUFT-10D**

DRILLING METHOD: Direct Push

NORTHING: 7,101,949 FT

DATE/TIME: 01/10/2014, 1130

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,963 FT

TOTAL DEPTH: 10 FT BGS

RIG: Geoprobe

		T		1110.	Geoproc		SON ACE ELEVATION. N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
		,	,	0.0-0.5 (1125)	ML ML		0-0.25 FT, TOPSOIL (ML) SILT; brown; damp, soft. 0.25-0.8 FT, (ML) CLAYEY SILT, trace fine gravel; brown and gray, friable; dry, firm.
-	1		4.0 4.0	2-4 (1126)	СН		0.8-5.0 FT, (CH) CLAY; dark brown, trace red mottling; dry, firm.
-5 -	2	NA	<u>4.0</u> 4.0	4-6 (1127)	СН		5.0-8.0 FT, (CH) CLAY; black; dry, very stiff.
_				6-8 (1128)			
- - 10	3		<u>2.0</u> 2.0	8-10 (1129)	СН		8.0-10.0 FT, (CH) CLAY; dark gray and black, some red mottling, trace calcareous nodules; dry, stiff-very stiff.
-							End of borehole at 10 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

Golder
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## LOG OF 2013-CUFT-11

DRILLING METHOD: Direct Push

NORTHING: 7,101,777 FT

DATE/TIME: 01/10/2014, 0915

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,386 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

		4 - 1 6 6 5			Geoplob		SUITAGE ELEVATION. INA
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
-	1	- NA	<u>2.0</u> 2.0	0.0-0.5 (0918) 0.5-2.0 (0919)	СН		0-4.0 FT, (CH) CLAY; brown; moist, soft.  2.0 FT, reddish mottling; firm-stiff.
-	2	20		2.0-4.0 (0920)	<b></b>		
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

#### LOG OF 2013-CUFT-14

DRILLING METHOD: Direct Push

NORTHING: 7,101,786 FT

DATE/TIME: 01/10/2014, 0915

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,526 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

IOTALL	JEP I H:	4 FT BGS		RIG:	Geoprob	e	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
_	1	NA	40		СН		0-2.75 FT, (CH) CLAY; dark brown and brown; dry, soft.
					SP	///	2.75-3.0 FT, (SP) SAND, some gravel; damp, compact.
				2-4 (0914)			3.0-4.0 FT, (CH) CLAY; dark brown, gray and black; dry, firm.
				(0914)	СН		
						1111	End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



#### LOG OF 2014-CUFT-15

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 04/04/2014, 1130

RIG: Geoprobe

NORTHING: 7,101,943 FT

EASTING: 2,478,859 FT

SURFACE ELEVATION: 627 FT AMSL

DEPTH	RUN	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No.	(PPM)	(Feet)		CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black, battery chips present; dry, soft to firm.
	1	N/A	<u>3.3</u> 4.0	0-0.5 (1130) 0.5-2 (1131) 2-4 (1132)	CL		1.0-4.0 FT, (CL) CLAY, some silt; dark brown/black, red mottling; dry, firm.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW

Golder
Associates

## LOG OF 2014-CUFT-16

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,951 FT

EASTING: 2,478,764 FT

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 04/04/2014, 1145

RIG: Geoprobe

SURFACE ELEVATION: 625 FT AMSL

		411000		KIG:	Geoproc		SURFACE ELEVATION: 625 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1145)	CL		0-1.0 FT, (CL) SILTY CLAY, trace gravel; dark brown/black, battery chips present; dry, soft to firm.
	1	N/A	<u>3.0</u> 4.0	0.5-2 (1146) 2-4 (1147)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, firm.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



### LOG OF 2014-CUFT-17

DRILLING METHOD: Direct Push

Direct Carr

NORTHING: 7,101,984 FT

DATE/TIME: 04/04/2014, 1200

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,621 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 626 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1200)	ML		0-1.0 FT, (ML) CLAYEY SILT, trace gravel; dark brown/black; dry, soft.
	1	N/A	3.8 4.0	0.5-2 (1201) 2-3 (1202)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black; dry, soft to firm.
						MAX	End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	Crystallizer Area	REVIEWED BY:	WL	

Golder
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### LOG OF 2014-CUFT-18

DRILLING METHOD: Direct Push

NORTHING: 7,101,940 FT

DATE/TIME: 04/04/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,079 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 630 FT AMSL

TOTALL	) <u> </u>	4 F I BGS		RIG:	Geoprob		SURFACE ELEVATION: 030 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0-0.5 (1113)	CL		0-1.0 FT, (CL) CLAY, some silt, trace gravel; dark brown/black; dry, firm.
	1	N/A	4.0 4.0	0.5-2 (1114) 2-4 (1115)	CL		1.0-4.0 FT, (CL) SILTY CLAY; dark brown/black, red mottling; dry, soft to firm.
						2.12.12.12	End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Crystallizer Area	REVIEWED BY:	JW



#### LOG OF D-11A

DRILLING METHOD: Direct Push

NORTHING: 7,102,905 FT

DATE/TIME: 01/09/2014, 1030

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,145 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(reet)	No.	(F.L.IVI)	(reet)		CL	71 71	
	1	NA	<u>2.5</u> 4.0	0.0-0.5 (1035)	СН		0.5-4.0 FT, (CH) CLAY; black; dry, firm.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary Corridor/North Wooded Area	REVIEWED BY:	JW



### LOG OF D-11B

DRILLING METHOD: Direct Push

NORTHING: 7,102,980 FT

DATE/TIME: 03/31/2014, 0945

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,129 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 644 FT AMSL

		311 003		100.	Geoplob		JOHN AGE ELEVATION. 044 IT ANIGE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1	N/A	<u>4.0</u> 5.0	0.0-0.5 (0950) 0.5-2.0 (0951)	CL		0.0-3.0 FT, (CL) CLAY, some silt, trace fine gravel; dark brown; dry, firm.
				2.0-4.0 (0952)	СН		3.0-4.0 FT, (CH) CLAY, trace fine gravel; brown and dark brown; dry, stiff-hard.  4.0-5.0 FT, Not Logged.
							4.0-5.0 FT, Not Eugged.
-5 -							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary Corridor and North Wooded Area	REVIEWED BY:	JW

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### LOG OF D-12A

DRILLING METHOD: Direct Push

DATE/TIME: 01/09/2014, 1045

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,914 FT EASTING: 2,480,333 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	<u>3.5</u> 5.0	0.0-0.5 (1050)	СН		0-5.0 FT, (CH) CLAY, trace fine gravel; dark brown and black; dry, hard.
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-							End of borehole at 5 FT BGS
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PROJECT No:	130-2080	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary Corridor/North Wooded Area	REVIEWED BY:	. JW

Golder
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#### LOG OF D-13A

DRILLING METHOD: Direct Push

NORTHING: 7,102,922 FT

DATE/TIME: 01/09/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,530 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

		3 7 1 1 1 1 1 1 1			Geoplob	1	GOILLAGE ELEVATION. 14/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
				0.0-0.5 (1104)	СН		0-1.0 FT, (CH) CLAY; dark brown; dry, stiff.
	1	NA	<u>5.0</u> 5.0		СН		1.0-5.0 FT, (CH) CLAY, trace fine gravel; dark gray; dry, stiff.
3		-					End of borehole at 5 FT BGS
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PROJECT No:_	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary Corridor/North Wooded Area	REVIEWED BY:	JW

#### Log of Boring: E-11 **Exide Technologies** Completion Date: 4/29/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): 16 Northing: Field Supervisor: Will Vienne, P.G. 7102765.709 2480143.5364 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery Lithologic Depth Sample USCS Interval Description (ft) (0 - 5.9) Silty CLAY, trace fine-medium gravel, trace carbonate precipitates below 4.5', dark reddish 0 0 - 0.5 brown, trace Fe staining below 5.0', moist, firm, low plasticity. 0.5 - 2 2 4/4 3 2-4 4 - 5 (5.9 - 12.0) Silty CLAY/clayey SILT, light grayish brown, abundant orange Fe staining, abundant calcareous precipitates, gravelly clay lenses ( $\sim$ 30% medium gravel in clay matrix) at 5.9-6.0 and 6.6-6.7', gravelly clay lens ( $\sim$ 10% gravel in clay matrix) from 11.3-12.0', moist, wet at 10.9', firm to 6 4/4 5 - 7 7 hard, softer with depth, low plasticity. 8 7 - 9 9 CLIMI 9 - 10.9 10 4/4 11 12 (12.0 - 16.0) Gravelly CLAY, ~15-20% fine-medium gravel in clay matrix, light grayish brown with abundant orange Fe staining, wet, soft, low plasticity. 13 4/4 15 16

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion

#### Log of Boring: E-11A **Exide Technologies** 3/6/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: Tim Jennings, P.G. Northing: 7102808.2937 Field Supervisor: 2480069.2399 Roberta Russell Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Lithologic Description Depth Sample uscs Interva (ft) (0 - 5.0) Silly CLAY/CLAY, dark reddish brown, trace orange Fe-ox staining from 3-5', trace 0 0 - 0.5calcareous nodules from 3.3-5', moist, firm to hard, low to medium plasticity. 1 0.5 - 22 5/5 2 - 4 3 4 - 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

	Exi	de Te	chnol	ogies			og of Bor	ring: E-11B		
			,		Completi	on Date:	3/15/2013	Drilling Method:	DPT	
	Frisco	Recyclin		r	Driller:		Dan Spaust	Borehole Diameter (in.)	2	
		Frisco, 1	ГХ		Driller's L	icense:	3038	Total Depth (ft):	5	
					Field Sup	pervisor:	Will Vienne, P.G.	Northing:	7102809.7866	
	PBW I	Project N	o. 1755		Logged E	Зу:	Will Vienne, P.G.	Easting:	2480025.1527	
		·- <b>J</b>			Sampling	Method:	4' Lined Tube	Ground Elev. (ft AMSL)		
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs	Lithologic Description						
0		0 - 0.5		(0 - 5.0) Slightly silty CLAY, very dark gray to dark brownish gray, soft and moist at 0-0.8', hard and dry at 0.8-5' with abundant limestone granules, low to medium plasticity clay.						
1 ~~		0.5 - 2								
2	3.5/4									
3 ***		2 - 3.5								
4	1/1	4-5								
_		***************************************								

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion,

### LOG OF E-11C

DRILLING METHOD: Direct Push

NORTHING: 7,102,811 FT

DATE/TIME: 01/09/2014, 1015

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,050 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

	7LI III.	3 7 1 6 6 5		RIG.	Geoprob		SURFACE ELEVATION. IVA
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
			,	0005	СН	////	0-0.5 FT, (CH) CLAY; brown; dry, firm.
-	1	NA	<u>5.0</u> 5.0	0.0-0.5 (1025)	СН		0.5-5.0 FT, (CH) CLAY, dark brown; dry, stiff.
-5							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Wooded Area/North Tributary Corridor	REVIEWED BY:	JW

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Associates
<b>Associates</b>

### LOG OF E-11C-A

DRILLING METHOD: Direct Push

NORTHING: 7,102,807 FT

DATE/TIME: 03/31/2014, 1000

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,052 FT

TOTAL DEPTH: 6 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 641 FT AMSL

RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
1	N/A	<u>4.8</u> 5.0	0.5-2.0 (1009) 2.0-4.0 (1010)	СН		0.0-4.0 FT, (CH) CLAY, trace silt; dark brown; dry, firm-stiff.
2	N/A	<u>1.0</u> 1.0	4.0-6.0 (1011)	СН		4.0-6.0 FT, (CH) CLAY, trace fine gravel; dry, hard.
						End of borehole at 6 FT BGS
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					are the second of the second o	-
	1	1 N/A	1 N/A 4.8 5.0	1 N/A 4.8 5.0 2.0-4.0 (1010)	1 N/A 4.8 5.0 CH	1 N/A 4.8 5.0 CH

PROJECT No:	130-2086	COMPILED BY:	BEF		
PROJECT:	Exide Frisco	CHECKED BY:	JDJ		
LOCATION:	North Tributary Corridor and North Wooded Area	REVIEWED BY:	JW		

Golder
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### LOG OF E-11D

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,709 FT

EASTING: 2,480,121 FT

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 01/10/2014, 1545

RIG: Geoprobe

	JEF III. •	4 F1 BGS		RIG:	Geoprob		SURFACE ELEVATION. N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
<u> </u>			· · · · · ·		ML	717.71	0-0.25 FT, TOPSOIL (ML) SILT; dark brown; dry, soft. 0.25-4.0 FT, (CH) CLAY, trace fine gravel; dark gray; dry, stiff.
-	1	NA	<u>3.3</u> 4.0	0.0-0.5 (1545)	СН		
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Wooded Area/North Tributary Corridor	REVIEWED BY:	JW

Golder
Associates

### LOG OF E-11E

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,720 FT

EASTING: 2,480,119 FT

DATE/TIME: 03/31/2014, 1030

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 640 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No.	(PPM)	(Feet)		ML	NI/ NI/	
-	1	N/A	<u>3.5</u> 5.0	0.0-0.5 (1031) 0.5-2.0 (1032) 2.0-4.0 (1033)	СН		
							4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
	4						
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	WANTED TO THE PARTY OF THE PART		, control of		*****		
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary Corridor and North Wooded Area	REVIEWED BY:	JW

Golder
--------

## LOG OF E-12A

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada DATE/TIME: 01/10/2014, 1600

RIG: Geoprobe TOTAL DEPTH: 4 FT BGS

NORTHING: 7,102,758 FT

EASTING: 2,480,294 FT

OTAL D	EPTH:	4 FT BGS		RIG:	Geoprob		
EPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(i ect)	110.			0.0-0.5			0-4.0 FT, (CH) CLAY; dark brown; moist, soft-firm.
				0.0-0.5 (1601)			
	1	NA	3.0 4.0		СН		
	ı		4.0				
		:					
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						1///	End of borehole at 4 FT BGS
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		No: 130-2					COMPILED BY: BEF

PROJECT No:	130-2086	COMPLED BA:	DEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
		REVIEWED BY:	JW
LOCATION:	North Wooded Area/North Tributary Corridor		

Golder
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### LOG OF E-13A

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,771 FT

EASTING: 2,480,548 FT

DATE/TIME: 01/10/2014, 1615

TOTAL C	DEPTH:	4 FT BGS		RIG:	Geoprobe		SURFACE ELEVATION: N/A
EPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
, coly				0.0-0.5 (1622)	СН		0-2.0 FT, (CH) CLAY; black; dry, stiff.
	1	NA	<u>4.0</u> 4.0		CH/GC		2.0-4.0 FT, (CH/GC) GRAVELLY CLAY; dark brown, trace light brown mottling, trace calcareous nodules, trace white crystals; dry, stiff.
						11/12/14	End of borehole at 4 FT BGS
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		3					
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-							
							COMPILED BY: BEF

PROJECT No:	130-2086	COMPILED BA:	BEF
PDO IFOT:	Exide Frisco	CHECKED BY:	JDJ
PROJECT:		REVIEWED BY:	JW
LOCATION:	North Wooded Area/North Tributary Corridor		

Golder
Associates

### LOG OF E-14A

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,778 FT

EASTING: 2,480,731 FT

DATE/TIME: 01/10/2014, 1630
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

IOIALL		4 F I BGS		KIG:	Geoprobe		OSITI NOL ELEVITIONI TILI
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 001)		(		0.0-0.5	ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown and black; moist, soft.
	1	NA	<u>4.0</u> 4.0	0.0-0.5 (1630)	СН		0.5-3.5 FT, (CH) CLAY; dark brown; dry, very stiff.  3.5-4.0 FT, (CH/GC) GRAVELLY CLAY; dark brown and white; dry, stiff.
_					CH/GC	7////	End of borehole at 4 FT BGS
							End of borehole at 4 FT BGS
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- 15 -							
-							
-							
						0.00	
		1	<u> </u>				

PROJECT No:	130-2086	 COMPILED BY:	BEF
PROJECT:	Exide Frisco	 CHECKED BY:	JDJ
LOCATION:	North Wooded Area/North Tributary Corridor	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		I	₋og of Borir	ng: E-15A				
	<u>i/</u>				Completi	on Date:	3/6/2013	Drilling Method:	DPT			
	Frisco	Recyclin	g Cente	r	Driller:	gantes and a survey of the sur	Margarito Estrada	Borehole Diameter (in.):	2			
		Frisco, 7	ΓX		Driller's L	icense:	58164	Total Depth (ft):	5			
					Field Sur	pervisor:	Tim Jennings, P.G.	Northing:	7102787.1342			
	DRW	Project N	0 1755		Logged F	Эу:	Roberta Russell	Easting:	2480940.0881			
	LDAA	i iojectiv	0, 1700		Sampling	Method:	5' Lined Tube	Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs		Lithologic Description							
0		0 - 0.5					eddish brown, moist, sof					
1	10 (0.000 to 0.000 to	0.5 - 2	CU	(0.5 - 3. gravel(~	(0.5 - 3.0) Gravelly CLAY, ~10% medium gravel, thin interbedded clayey medium to coarse gravel(~40% gravel), light brown, moist, soft.							
2	5/5	\$										
3		2 - 4	1.1.1.1.1.1.	(3.0 - 4.	4) Sandy	SILT w/cla	y and gravel,~20% medi	um to coarse gravel, light yell	owish brown,			
			A n c ommercemen	moist, s			-					
4	]		ML									
→		4 - 5			(4.4 - 5.0) Silty CLAY/clayey SILT, light grayish brown, abundant orange Fe-ox staining, moist, firm, low plasticity.							
_		4-0	CLIMI									

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Note

Borehole plugged with bentonite chips upon completion.

Golder
<b>Associates</b>

### **LOG OF ECO-1A**

DRILLING METHOD: Direct Push

NORTHING: 7,101,375 FT

DATE/TIME: 01/09/2014, 1545

DRILLER: SCI, Margarito Estrada

EASTING: 2,481,023 FT

TOTAL DEPTH: 2 FT BGS

RIG: Geoprobe

DESCRIPTION AND COMMENTS   DESCRIPTION AND COMMENTS	TOTA	_ DEPTH: 	2 FT BGS		RIG:	Geoprob	e	SURFACE ELEVATION: N/A
1 NA 2.0 (1546)  1 NA 2.0 (1547)  1 NA 2.0 (1547)  CH (1547)  1.0-2.0 FT, (CH) CLAY, trace fine gravel; light brown, reddish yellow mottling; moist, firm.  End of borehole at 2 FT BGS	DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
0.5-2.0 CH mottling: moist, firm.  End of borehole at 2 FT BGS	_			2.0 2.0	(1546)	CH		
-5 - - - - - - - - - - - -					0.5-2.0 (1547)	СН		
								End of borehole at 2 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF		
PROJECT:	Exide Frisco	CHECKED BY:	JDJ		
LOCATION:	SE of South Disposal Area	REVIEWED BY:	JW		

### **LOG OF ECO-2A**

DRILLING METHOD: Hand Auger

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,290 FT

EASTING: 2,481,023 FT

TOTAL DEPTH: 2 FT BGS

DATE/TIME: 01/09/2014, 1545

RIG: Hand Auger

		211 000			TIATIU AU	.95.	SUNI ACE ELEVATION. IN/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	<u>2.0</u> 2.0	0.0-0.5 (1554) 0.5-2.0 (1555)	ML ML		0-1.0 FT, (ML) CLAYEY SILT, trace gravel; brown; dry, soft.  1.0-2.0 FT, (ML) CLAYEY SILT; light brown; dry, soft.
				(1000)			End of borehole at 2 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	Tal
LOCATION:	SE of South Disposal Area	REVIEWED BY:	JW

Exide Technologies						Log of Boring: ECO-3					
***************************************	F	D		***************************************	Completi	on Date:	3/6/2013	Drilling Method:	Hand Auger		
	Frisco	Frisco.	ng Cente	er.	Driller:		Margarito Estrada	Borehole Diameter (in.):	3		
		rrisco,	1.^		Driller's License:		58164	Total Depth (ft):	3		
***************************************	·····	***************************************		***************************************	Field Sup	ervisor:	Tim Jennings, P.G.	Northing:	7101296.3389		
	PBW F	Project N	lo. 1755		Logged E		Roberta Russell	Easting:	2480817.4415		
***************************************	<del>-</del>			<del></del>	Sampling Method: 3"X6" Hand Auger Ground Elev. (ft AMS			Ground Elev. (ft AMSL):	**		
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS				Lithologi Descriptio				
0	0.5/0.5	0 - 0.5		(0 - 3.0)	Silty CLAY	, dark red	dish brown, abundant ro	ot material at 0-2', moist, soft	to firm, low		
4	0.5/0.5			plasticity	<i>f</i> .						
1 ***	0.5/0.5	0.5 - 2									
2	0.5/0.5										
<b>2</b>	0.5/0.5	2 - 3									
3	0.5/0.5	2-3									

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Borehole plugged with bentonite chips upon completion.



### LOG OF ECO-4A

DRILLING METHOD: Direct Push

NORTHING: 7,101,109 FT

DATE/TIME: 01/10/2014, 1515

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,847 FT

TOTAL DEPTH: 2 FT BGS

RIG: Geoprobe

DEPTH	RUN	PID	REC		.,	CDADUIC	
(Feet)	No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		:		0.0-0.5	ML	<u> </u>	0-0.25 FT, TOPSOIL - (ML) SILT, trace gravel; brown; dry, soft. 0.25-1.0 FT, (CH) CLAY, trace fine gravel; dry, very stiff.
	1	NA	<u>2.0</u> 2.0	(1510)	CH		
	'	NA	2.0	0.5-2.0 (1511)			1.0-2.0 FT, LIMESTONE; yellowish tan, platy; dry, hard.
						1,1,1,1	End of borehole at 2 FT BGS
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-5							
- 10							
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		Permitte					
				<u> </u>			

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Wooded Area	REVIEWED BY:	JW

# Golder

#### LOG OF ECO-4B

DRILLING METHOD: Hand Auger

NORTHING: 7,101,151 FT

DATE/TIME: 01/13/2014, 1345

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,940 FT

TOTAL DEPTH: 2 FT BGS

RIG: Hand Auger

		2 1 1 1 1 1 1 1		- INO.	папи Аи	901	SURFACE ELEVATION. IN/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_	1	NA	2.0 2.0	0.0-0.5 (1348) 0.5-2.0 (1349)	ML		0-1.75 FT, (ML) CLAYEY SILT, trace fine gravel; dark brown; dry, soft.  1.75-2.0 FT, LIMESTONE; yellowish tan; dry, hard.
							End of borehole at 2 FT BGS (Refusal)
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<del>-</del> 15		-					
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-						3334W95/mgs	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Wooded Area	REVIEWED BY:	JW

#### Log of Boring: ECO-6 **Exide Technologies** Completion Date: 3/4/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Northing: Field Supervisor: Will Vienne, P.G. 7101325.3004 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: 2480600.8295 Sampling Method: 3"x 5' Barrel Ground Elev. (ft AMSL): --Sample Interval Lithologic Description Depth USCS (ft) (0-5.0) Silty CLAY, dark brownish gray, trace limestone granules, slightly moist to dry, soft to firm, soft at 0-2', firm at 2-5', low plasticity. 0 1 0.5 - 2 2 4.6/5 3 2 - 4 4 - 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

Exide Technologies						Log of Boring: ECO-7				
	Completion					on Date:	3/6/2013	Drilling Method:	Hand Auger	
	Frisco Recycling Center Driller:				Driller:		Margarito Estrada	Borehole Diameter (in.)	: 3	
Frisco, TX Driller's			Driller's L	icense:	58164	Total Depth (ft):	3			
	Field Su			Field Sup	ervisor:	Tim Jennings, P.G.	Northing:	7101179.0319		
PBW Project No. 1755 Logge			Logged E	Ву:	Roberta Russell	Easting:	2480616.4118			
					Sampling	Method:	3"X6" Hand Auger	Ground Elev. (ft AMSL)	<u> </u>	
Depth (ft)	Recovery (ff/ft)	Sample Interval	USCS				Litholog Descript	ion		
0	0.5/0.5				Silty CLAY ow plastici		ILT, dark reddish brown	, abundant root material from	0-0.5', moist, soft	
4 .	0.5/0.5			to min, se	JVY PIASUGI	ıy.				
	0.5/0.5	0.5 - 2	CLIMI							
2	0.5/0.5									
	0.5/0.5	2-3								
2	0.5/0.5	2-0								

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

***************************************	Exide Technologies						Log of Boring: ECO-7A				
	Completion					on Date:	3/6/2013	Drilling Method:	Hand Auger		
		•	ng Cente	r	Driller:		Margarito Estrada	Borehole Diameter (i	n.): 3		
	Frisco, TX Drill			Driller's License:		58164	Total Depth (ft):	3			
	Field Su					ervisor:	Tim Jennings, P.G.	Northing:	7101171.2643		
	PBW Project No. 1755 Logge			Logged B	Зу:	Roberta Russell	Easting:	2480616.2589			
					Sampling Method: 3"X6" Hand Auger Ground Elev. (ft AMSL)		3L):				
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS		Lithologic Description						
0	0.5/0.5	0 - 0.5		(0 - 2.5) low plast		//clayey Si	LT, dark reddish brown	, ~10% calcareous nodules	, moist, soft to firm,		
1	0.5/0.5			iow piasi	иску.						
,	0.5/0.5	0.5 - 2	CUML								
,	0.5/0.5										
1 2	0.5/0.5	2-3									
a	0.5/0.5	۷-3	/cc//	(2.5 - 3.0	(2.5 - 3.0) Silty CLAY, yellowish brown, dry, very hard, low plasticity.						

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

	Exi	de Te	chnol	ogies		l	Log of Bori	ng: ECO-7B				
Completion						on Date:	3/15/2013	Drilling Method:	Drive Sampler			
		Recyclin		Γ	Driller:			Borehole Diameter (in.)	): 2			
Frisco, TX Drille					Driller's L	icense:	**	Total Depth (ft):	2			
Field Sur						ervisor:	Will Vienne, P.G.	Northing:	7101168.7735			
PBW Project No. 1755 Logged					Logged E	Зу:	Will Vienne, P.G.	Easting:	2480616.5561			
	. =	,0,000			Sampling	Method:	6" Lined Tube	Ground Elev. (ft AMSL	):			
Depth (ft)	Recovery (ff/ft)	Sample Interval	uscs				Litholog Descripti	ion				
0	0.5/0.5	0 - 0.5		(0 - 2.0) with den	Slightly Sa	andy SILT	Y CLAY, dark brownish ontent below 1', dry, soft	gray, becoming more brown to slightly firm, low plasticity.	with Fe staining			
,	0.5/0.5	0.5 - 1				/ <b></b> , 0.		, , , , , , , , , , , , , , , , , , , ,				
	0.5/0.5	1 - 1.5										
	0.5/0.5	1.5 - 2					***************************************	VIII.				

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Borehole plugged with bentonite chips upon completion.



#### **LOG OF ECO-7C**

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,203 FT

EASTING: 2,480,611 FT

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 01/14/2014, 1515

RIG: Geoprobe

TOTAL	DEF I II.	4 FT BGS		RIG:_	Geoprob	е	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-				0.0-0.5 (15 <b>1</b> 4)	ML		0-1.0 FT, (ML) CLAYEY SILT; dark brown; moist, firm-stiff.  1.0 FT, sand, silt, and fine gravel lense (~2 inches).  1.0-2.5 FT, (CH) CLAY, trace fine gravel; brown; dry, firm-stiff.
	1	NA	4.0 4.0		СН		
_				2.0-3.0 (1515)	CL		2.5-4.0 FT, (CL) SILTY CLAY; brown and gray; dry, hard.
_ _ 5							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Wooded Area	REVIEWED BY:	.IW

# Golder

#### LOG OF ECO-7D

DRILLING METHOD: Direct Push

DATE/TIME: 01/14/2014, 1500

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,170 FT EASTING: 2,480,614 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5 (1505)	ML		0-1.0 FT, (ML) CLAYEY SILT, dark brown; moist, firm-stiff.
	1	NA	3.0 4.0		СН		1.0-2.5 FT, (CH) CLAY; brown; moist, soft-firm.
					CL		2.5-4.0 FT, (CL) SILTY CLAY; brown and gray; dry, hard.
-5		-					End of borehole at 4 FT BGS
_						- chieferni	
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				7.77			
_						7001	
_ _ 15							
	***************************************						
						tan (water)	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Wooded Area	REVIEWED BY:	JW

#### Log of Boring: ECO-8 **Exide Technologies** Drilling Method: Completion Date: 3/4/2013 DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Will Vienne, P.G. Northing: 7101519.2687 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: 2480460.2113 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/ft) Lithologic Description Depth Sample USCS Interval (ft) (0 - 5.0) Silty CLAY, dark brownish gray, trace limestone pebbles, increasing firmness with depth, slightly moist, soft to slightly firm, low plasticity. ō 0.5 - 2 2 4.6/5 3 2 - 4 4 - 5 5

## **PBW**

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Borehole plugged with bentonite chips upon completion,

Golder
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#### **LOG OF ECO-8A**

DRILLING METHOD: Direct Push

NORTHING: 7,101,537 FT

DATE/TIME: 01/09/2014, 1600

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,457 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5 (1559)	СН		0-1.0 FT, (CH) CLAY; dark brown, organic matter; dry, stiff. 0.66 FT, gravel lense (~2 inches)
na.							1.0-4.0 FT, (CH) CLAY; black; dry, firm.
-	1	NA	4.0 4.0				
-					CH		
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							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	South Wooded Area	REVIEWED BY:	JW	



#### **LOG OF ECO-8B**

DRILLING METHOD: Direct Push

DATE/TIME: 03/31/2014, 1630

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

NORTHING: 7,101,601 FT

EASTING: 2,480,466 FT

SURFACE ELEVATION: 634 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5 (1639)	ML		0.0-0.5 FT, (ML) CLAYEY SILT, some organic material; dark brown; dry, firm.
-	1	N/A	4.3 5.0	0.5-2.0 (1640) 2.0-4.0 (1641)	CL		0.5-4.0 FT, (CL) CLAY, some gravel; dark brown and black; dry, firm.
			,				4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Wooded Area	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies			Log of Bori	ng: ECO-9		
Completio							3/4/2013	Drilling Method:	DPT	
Frisco Recycling Center Driller: Frisco, TX Driller's Li							Margarito Estrada	Borehole Diameter (in.)	. 2	
						icense:	58164	Total Depth (ft):	5	
					Field Sup	pervisor:	Will Vienne, P.G.	Northing:	7101336.2375	
PBW Project No. 1755 Logged B					Logged I	Зу:	Will Vienne, P.G.	Easting:	2480435.6624	
1 511 1 10 500 110 . 1700						g Method:	5' Lined Tube	Ground Elev. (ft AMSL)	t <sup>1</sup> 44	
Depth (ft)	Recovery (fl/fl)	Sample Interval	uscs	Lithologic Description						
1		0.5 - 2	<b>()</b>	(1.4 - 5.	ited and ur	nconsolida	ted shale from 1-1.4', sl	irk brownish gray, abundant lir ightly moist, soft, low plasticity fine grained, dry, becoming c	<i>1</i> .	
3 ~	3.9/5	2 - 3,9	SW							
5										

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.



### **LOG OF ECO-10A**

DRILLING METHOD: Direct Push

DATE/TIME: 01/10/2014, 1445

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,182 FT EASTING: 2,480,399 FT

TOTAL DEPTH: 1.5 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	<u>1.5</u> 1.5	0.0-0.5 (1443)			0-1.5 FT, LIMESTONE; yellowish tan, platy; dry, hard.
							End of borehole at 1.5 FT BGS (Refusal)
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PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	South Wooded Area	REVIEWED BY:	JW	

#### Log of Boring: ECO-11 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: DPT Frisco Recycling Center Frisco, TX Margarito Estrada Borehole Diameter (in.): 2 Driller: Driller's License: 58164 Total Depth (ft): 7102588.4364 Field Supervisor: Tim Jennings, P.G. Northing: 2480247.5265 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample USCS Interval Description (ft) 0 (0 - 4.1) Silty CLAY, dark brown, moist, soft to firm, low plasticity. 0 - 0.51 0.5 - 22 4.5/5 3 2 - 4 4 (4.1 - 5.0) Gravelly CLAY, ~20% fine gravel, dark brown, wet, soft, low plasticity clay. 4 - 5 5

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Barehole plugged with bentonite chips upon completion.

#### Log of Boring: ECO-12 **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: DPT Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Margarito Estrada Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Field Supervisor: Northing: 7102508.9348 PBW Project No. 1755 Logged By: Roberta Russell 2480906.7256 Easting: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Sample Lithologic uscs (ft) Interval Description 0 (0 - 1.3) Silty CLAY, dark brown, trace gravel, moist, hard, low plasticity. 0 - 0.5 1 0.5 - 2ĠĆ (1.3 - 1.5) GRAVEL, w/CLAY, medium gravel, dark, soft. (1.5 - 4.7) Sitty CLAY, light reddish brown, moist, firm, low to medium plasticity. 2 5/5 3 2 - 4 4 4 - 5 (4.7 - 5.0) Gravelly CLAY, ~10% medium gravel, moist, firm, low plasticity clay. 5

## $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

### **LOG OF F-5A**

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,507 FT

EASTING: 2,478,846 FT

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 01/10/2014, 1345

RIG: Geoprobe

	/Lr III.	4 FT BGS		RIG:	Geoprob	е	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
-	1	NA	<u>3.3</u> 4.0	0.0-0.25 (1349) 1.0 (1350)	СН		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
-5						j	End of borehole at 4 FT BGS
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-		4.					
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PROJEC	CT No:	130-2086					COMPILED BY: BEF

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Lake Parcel	REVIEWED BY:	JW

### LOG OF F-5B

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,527 FT EASTING: 2,478,845 FT

DATE/TIME: 01/10/2014, 1345
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	3.5 4.0	0.0-0.25 (1347) 1.0 (1348)	СН		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
_							End of borehole at 4 FT BGS
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PROJECT NO.	130-2000	COMPILED BT.	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Lake Parcel	REVIEWED BY:	JW

Golder
ASSOCIATES

## LOG OF F-5C

DRILLING METHOD: Direct Push

NORTHING: 7,102,506 FT

DATE/TIME: 01/10/2014, 1345

DRILLER: SCI, Margarito Estrada

EASTING: 2,478,867 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No	(PPM)	3.5 4.0	0.0-0.25 (1351) 1.0 (1352)	CH	LIGG	0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
5 							End of borehole at 4 FT BGS
- - 10							
- - -15							
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							**************************************

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Lake Parcel	REVIEWED BY:	JW



## LOG OF F-5D

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,487 FT

EASTING: 2,478,845 FT

DATE/TIME:	01/	10/2014, 1330
TOTAL DEPT	H:	4 FT BGS

RIG:	Geoprob	е	
	LICOS	GRAPHIC	
	11000	Or or a rido	DE00

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1	NA NA	3.0 4.0	0.0-0.25 (1338) 1.0 (1339)	СН		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Lake Parcel	REVIEWED BY:	JW

Golder
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### LOG OF F-5E

DRILLING METHOD: Direct Push

DATE/TIME: 01/10/2014, 1345

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,507 FT EASTING: 2,478,825 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

ļ						CCOPIOL		SURFACE ELEVATION: N/A
	DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	-	1	NA	3.0 4.0	0.0-0.25 (1342) 1.0 (1343)	СН		0-4.0 FT, (CH) CLAY; dark brown, reddish mottling; dry, stiff.
								End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Lake Parcel	REVIEWED BY:	JW

### LOG OF 2013-FFTA-01

DRILLING METHOD: Direct Push

NORTHING: 7,102,397 FT

DATE/TIME: 01/08/2014, 0930

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,828 FT

TOTAL DEPTH: 19 FT BGS

RIG: Geoprobe

DEPTH	RUN	PID	REC	T		GRADHIC	
(Feet)	No.	(PPM)	(Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					CL		0-0.25 FT, Concrete 0.25-0.75 FT, (CL) SILTY CLAY, trace gravel; brown; dry, very stiff.
_		0.4		0.25-2.0 (1020)			0.75-6.0 FT, (CL) CLAY, some silt; brown, trace calcareous nodules; dry, very stiff.
-	1	0.4	<u>5.0</u> 5.0	2.0-4.0 (1030)	CL		
-5		0.8					5.0 FT, trace gravel.
						1///	C 0 420 FT (OLVOLAV
	2	1.0	<u>5.0</u> 5.0				6.0-13.0 FT, (CL) CLAY, some silt; gray with reddish-orange mottling, calcareous nodules; dry, stiff.
-10		1.8			CL		9.0-10.0 FT, organics.
-		1.3					
	3	1.2	<u>5.0</u> 5.0		ML/GM		13.0-14.0 FT, (ML/GM) SILT and GRAVEL; light gray; damp, compact.
					WIL/GIVI	Palal	
<b>– 15</b>	ì	1.9					14.0-18.0 FT, (CH) CLAY; gray, reddish-orange mottling; dry, very stiff.
							15.0-16.0 FT, organics.
-	4	88	4.0 4.0		CH		
	· .	516		18.0-19.0 (1045)			18.0-19.0 FT, SHALE; dark gray, reddish-yellow mottling; dry, hard.
							End of borehole at 19 FT BGS

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training Area	REVIEWED BY:	JW

### LOG OF 2013-FFTA-02

DRILLING METHOD: Direct Push

NORTHING: 7,102,378 FT

DATE/TIME: 01/07/2014, 1515

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,781 FT

TOTAL DEPTH: 19 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		33.4		0.25-2 (1530)			0-0.25 FT, Concrete 0.25-5.0 FT, (CH) CLAY; black, reddish mottling; moist, soft.
	1	71.7	<u>5.0</u> 5.0	2-4 (1545)	СН		
-5		4.8					5.0-10.0 FT, (CH) CLAY; brown; moist, stiff.
	2	7.5	<u>5.0</u> 5.0		СН		
		7.5					
- 10		6.0			СН		10.0-12.0 FT, (CH) CLAY; black; moist, soft.  11.0 FT, brown.
	3	4.7	<u>5.0</u> 5.0		ML		12.0-14.0 FT, (ML) GRAVELLY SILT; brown w/ reddish mottling; soft.
15		1.9		THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE P	СН		14.0-16.0 FT, (CH) CLAY; brown; moist, stiff.
	4	2.4	<u>4.0</u> 4.0		CL/GC		16.0-17.0 FT, (CL/GC) gravelly SILTY CLAY; brown, calcareous nodules; moist, soft.  17.0-18.0 FT, (CH) CLAY; brown and gray, yellow and red mottling; dry, hard.
		3.9			СН		18.0-19.0 FT, SHALE; dark gray; hard.
							End of borehole at 19 FT BGS (Refusal)
PROJ	ECT No:	130-2086	······································				COMPILED BY: BEF

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training Area	REVIEWED BY:	JW

### LOG OF 2013-FFTA-03

DRILLING METHOD: Direct Push

NORTHING: 7,102,425 FT

DATE/TIME: 01/07/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,753 FT

TOTAL DEPTH: 18 FT BGS

RIG: Geoprobe

TOTALL		10 F1 BG3		KIG.	Geoproc		SUNI AGE ELEVATION. N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
					ML		0-0.5 FT, FILL (ML) CLAYEY SILT, trace gravel; black; dry, soft.
		2.1		0-2 (1316)	CL		0.5-2.0 FT, (CL) SILTY CLAY, trace gravel; brown and dark gray, calcareous nodules; dry, firm.
_	1	5.2	<u>5.0</u> 5.0	2-4 (1317)	CL		2.0-4.5 FT, (CL) SILTY CLAY, trace fine gravel; dark brown; dry, firm.
-5		4.0					4.5-10.0 FT, (ML) SANDY SILT; light gray and brownish orange, platy, calcareous nodules; firm. 5.0-6.0 FT, organics.
-							
_	2	5.5	<u>5.0</u> 5.0		ML		
		4.5					
- 10					ML		10.0-10.5 FT, (ML) CLAYEY SILT; black; moist.
_		5.2			GM		10.5-12.0 FT, (GM) SILTY GRAVEL; gray and brown; loose.
	3	6.7	<u>5.0</u> 5.0				12.0-18.0 FT, (CL) SILTY CLAY; gray and brown; dry, stiff.
- 15		77.8		14-16	CL		
				(1320)			
_	4	9.9	3.0 3.0	16-18 (1323)			
_						X 12121	End of borehole at 18 FT BGS (Refusal)
						1	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training Area	REVIEWED BY:	JW



## LOG OF 2014-FFTA-04

DRILLING METHOD: Direct Push

NORTHING: 7,102,336 FT

DATE/TIME: 03/31/2014, 1400

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,847 FT

TOTAL DEPTH: 5.5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 648 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						0 0 0 0	0.0-0.5 FT, Concrete
-5	1	N/A	<u>5.0</u> 5.0	0.5-1.0 (1410) 1.0-2.0 (1411) 2.0-4.0 (1412)	СН		0.5-5.5 FT, (CH) CLAY; black; dry, stiff-hard.  3.0 FT, dark gray
-5							
		,					End of borehole at 5.5 FT BGS
- 10							
- 15							
residence							

PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	Former Fire Fighter Training Area	REVIEWED BY:	JW	

### LOG OF 2014-FFTA-05

DRILLING METHOD: Direct Push

DATE/TIME: 03/31/2014, 1345

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,439 FT

EASTING: 2,480,779 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 647 FT AMSL

		,			Сеоргов	1 1	OUNTAGE ELEVATION, GF/ 11 ANIBE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1	N/A	<u>5.0</u> 5.0	0.0-0.5 (1345) 0.5-2.0 (1346) 2.0-4.0 (1347)	CL		0.0-3.5 FT, (CL) CLAY, some silt, trace fine gravel; dark gray and black; dry, hard.  3.5-4.0 FT, (CL) CLAY, some silt, some sand, some fine gravel; dry, very stiff.  4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training Area	REVIEWED BY:	JW

### LOG OF 2014-FFTA-06

DRILLING METHOD: Direct Push

NORTHING: 7,102,418 FT EASTING: 2,480,618 FT

DATE/TIME: 04/01/2014, 1145

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 14 FT BGS SURFACE ELEVATION: 643 FT AMSL RIG: Geoprobe **DEPTH** RUN PID REC SAMPLE USCS **DESCRIPTION AND COMMENTS** (Feet) (PPM) No. (Feet) 0.0-1.0 FT, (CL) SILTY CLAY, trace gravel; black; dry, hard. 4.2 0.0-0.5 CL (1210)1.0-3.25 FT, (CH) CLAY, trace gravel; brown and gray; dry, firm. 5.4 0.5-2.0 (1211)1 CH 40.2 2.0**-**4.0 (1212) 3.25-4.5 FT, (CH) CLAY, black and gray; dry, soft. 3.25 FT, some sandy silt and gravel for 0.25 FT. СН 4.5-8.0 FT, (CL) sandy SILTY CLAY; gray and brown; damp, soft-firm. - 5 4.6 4.0 4.0 2 CL 4.8 8.0-13.5 FT, (CH) CLAY; light brown and gray; damp, soft. -- 10 3 9.0 CH 12.0 FT, some organic material; black. 4 4.1 13.5 FT, some organic material; black. 13.5-14.0 FT, SHALE, some clay; dry, hard. End of borehole at 14 FT BGS (Refusal) - 15

PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	North of North Disposal Area	REVIEWED BY:	JW	

# Golder Associates

## LOG OF 2014-FFTA-07

DRILLING METHOD: Direct Push

NORTHING: 7,102,435 FT

DATE/TIME: 04/01/2014, 1030

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,573 FT

TOTAL DEPTH: 12 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 643 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		7.1		0.0-0.5	CL		0.0-1.0 FT, (CL) SILTY CLAY, some organic material; dark brown and black; dry, stiff-hard.
	,	7.1	2.5	(1055) 0.5-2.0 (1056)	ML/SP		1.0-2.0 FT, (ML/SP) SAND and SILT, some gravel; brown; dry, loose.
_	1	5.5	<u>2.5</u> 4.0	2.0 <b>-4</b> .0 (1057)	СН		2.0-6.0 FT, (CH) CLAY, trace silt and gravel; gray and brown, reddish mottling, white calcareous nodules; dry, stiff.
-5	2	5.6	<u>N/A</u> 4.0				
_	2	5.7	4.0		СН		6.0-8.0 FT, (CH) CLAY; gray and reddish brown; moist, stiff-hard.  8.0 FT, platy.
- 10	3	10.6	<u>N/A</u> 4.0		ML/GP		8.0-12.0 FT (ML/GP) CLAYEY SILT and GRAVEL, some sand; gray, reddish mottling, platy, friable; dry, stiff.
		4.8	4.0				12.0 FT, LIMESTONE.
-							End of borehole at 12 FT BGS (Refusal)
— 15 –							
		1					

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North of North Disposal Area	REVIEWED BY:	JW

## LOG OF 2014-FFTA-08

DRILLING METHOD: Direct Push

DATE/TIME: 04/01/2014, 1100

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 15 FT BGS RIG: Geoprobe

NORTHING: 7,102,462 FT

EASTING: 2,480,620 FT

SURFACE ELEVATION: 643 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		4.7		0.0-0.5	ML		0.0-0.5 FT, (ML) CLAYEY SILT, some gravel and organic material; brown; dry, hard.
	1	6.3	<u>3.5</u> 4.0	(1132) 0.5-2.0 (1133)	CL		0.5-2.25 FT, (CL) SILTY CLAY, trace gravel; brown and gray; dry, stiff-hard.
		6.1	4.0	2.0-4.0 (1134)	SM		2.25-3.0 FT, (SM) SILTY SAND; brown; moist, compact. 2.25 FT, organic material for 0.25 FT. 2.75 FT, coarse gravel for 0.25 FT. 3.0-5.5 FT, (CL/SP) SILTY CLAY and SAND; gray, platy, friable; damp, firm.
-5		4.1			CL/SP		4.0 FT, trace sand.
_	2	4.9	4.0 4.0		CL		5.5-9.0 FT, (CL) SILTY CLAY, trace gravel; gray, reddish mottling; damp, firm.
		5.8	4.0		СН		8.5 FT, SANDY GRAVEL for 0.25 FT.  9.0-14.5 FT, (CH) CLAY and SHALE; gray, reddish yellow mottling; damp, hard.
- 10 -	3	4.5	<u>4.0</u> 4.0				
-	4	4.1	3.0 3.0				13.25 FT, SAND for 0.25 FT, brown and gray; dry.
							14.5-15.0 FT, SHALE; dark gray, yellowish mottling; dry, hard.
- 15 - -							End of borehole at 15 FT BGS (Refusal)

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North of North Disposal Area	REVIEWED BY:	JW

#### Log of Boring: 2013-FOP-1 **Exide Technologies** 3/14/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): Will Vienne, P.G. 7101872.2058 Field Supervisor: Northing: Will Vienne, P.G. 2480549.0768 Logged By: Easting: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery Lithologic Depth Sample uscs (ft) Interval Description (0 - 5.0) Silty CLAY, very dark brownish gray, dry, slightly firm to firm, low plasticity clay, moderately organic with abundant decayed plant fragments to 2.7', firmer with abundant limestone granules below 2.7', limestone pebbles at 2.7-2.8'. 0 0 - 0.5 1 0.5 - 23.6/4 3 2 - 4 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.



## LOG OF 2013-FOP-1A

DRILLING METHOD: Direct Push

DATE/TIME: 01/09/2014, 1400

DRILLER: SCI, Margarito Estrada

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

NORTHING: 7,101,866 FT

EASTING: 2,480,555 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	1
_				0.0-0.5 (1358)	CL		0-1.5 FT, (CL) CLAY, trace gravel; black and dark brown; dry, firm.
	1	NA	<u>3.5</u> 4.0		ML		1.5-2.5 FT, (ML) CLAYEY SILT, trace fine gravel; gray and dark gray; dry, stiff.
_					CL		2.5-4.0 FT, (CL) SILTY CLAY, trace fine gravel; black, friable, trace calcareous nodules; dry, hard.
						2.12.12.12	End of borehole at 4 FT BGS
-5							
_							
_		-					
-							
<b>- 10</b>							
3							
-							
_						***************************************	
-							
<b>– 15</b>				1			
-							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
	Truck Staging/Admin Bldg	REVIEWED BY:	JW

	Exic	de Te	chnol	ogies		ı	og of Boring	j: 2012-FWC	S-1	
		<del></del>			Completion	on Date:	1/18/2012	Drilling Method:	Hand Sampler	
	Frisco Recycling Center					ompany:	NA	Borehole Diameter (in.):	2.25	
	Frisco, TX				Driller.	,,	NA	Total Depth (ft):	2	
Driller's					Driller's L	icense:	NA	Northing:	7102016.84	
PBW Project No. 1755 Logged				Logged E	Зу:	Christopher Moore, P.G.	Easting:	2479679.40		
		10,001			Sampling	Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):		
Depth (ft)	Recovery (ft/ft)	Old Old	Sample Interval	uscs			Des	nologic cription		
1	0.6/2.0	0	0-2	Sch.	(0 - 2.0) CLAY, CH, very dark brown, moist, firm, medium plasticity, trace roots, no staining or foreign material observed, no odor.					

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Nates:

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used expensively from the report to which it is attached.

### Log of Boring: 2012-FWCS-1 **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: Frisco Recycling Center Margarito Estrada Driller: Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Northing: 7102032.2705 Field Supervisor: 2479675.8982 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Recovery (ff/ft) Lithologic Description Depth Sample uscs Interval (ft) (0 - 2.4) FILL, clayey silt/silty clay, reddish brown, slag fragment at 1.8', plastic chip at 2.1', trace orange staining, moist, soft to firm. 1 FjĽĽX 2 4.5/5 (2.4 - 5.0) Clayey SILT, dark reddish brown, moist, soft to firm, low plasticity. 3 2 - 4 ML 4 - 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

### Log of Boring: 2012-FWCS-1A **Exide Technologies** 3/5/2013 DPT Drilling Method: Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.). 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7102026.4054 Field Supervisor: Northing: Roberta Russell 2479670.9974 Logged By: Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ff) Lithologic Depth Sample USCS Interval Description (ft) (0 - 1.0) GABION BASKET 0 1 (1.0 - 2.0) FILL, clayey silt, light reddish brown, slag/battery chip fragments at ~2', dry, hard. 1 - 2 2 (2.0 - 5.0) Clayey SILT/silty CLAY, dark reddish brown, trace red Fe-ox staining, moist. 4/5 2 - 4 3

## $\mathbf{PBW}$

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Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-FWCS-1B **Exide Technologies** Drilling Method: 3/15/2013 Drive Sampler Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): Will Vienne, P.G. 7102016.0586 Field Supervisor: Northing: 2479668.7979 Will Vienne, P.G. PBW Project No. 1755 Logged By: Easting: Sampling Method: 6" Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Lithologic Sample USCS Description Interval (ft) (0 - 1.1) GABION BASKET, no recovery. 0 NR NR 1 (1.1 - 3.1) Silly CLAY, dark brown to gray, common decayed plant material, abundant limestone granules, moist at 1.1-2.6', wet at 2.6-3.1', soft, low to medium plasticity. 0.5/0.5 1.1 - 1.6 0.5/0.5 1.6 - 2.1 2 0.5/0.5 2.1 - 2.6 0.5/0.5 2.6 - 3.1

**PBW** 

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Borehole plugged with bentonite chips upon completion,

	Exi	de Te	chnol	ogies			Log of Boring	յ։ 2012-FWC	S-2	
					Completi	on Date:	1/19/2012	Drilling Method:	Hand Sampler	
	Frisco Recycling Center Drillir						NA	Borehole Diameter (in.):	2.25	
Frisco, TX Driller:							NA	Total Depth (ft):	2	
<b></b>	Driller's						NA	Northing:	7101912.01	
	PBW Project No. 1755 Logged F						Christopher Moore, P.G.	Easting:	2479827.17	
	1 2 1 1 10 10 11 00 1 1 1 1 1 1 1 1 1 1					g Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):		
Depth (ft)	Recovery (ft/ft)	(mdd) Old	Sample Interval	USCS				ologic cription		
1	1.3/2.0	0	0-2	GH.	(0 - 2.0) CLAY, CH, very dark brown, moist, firm, medium plasticity, some sand, white crystalline material deposited in cracks to approximately 1 foot, no odor.					

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Notes: Borehole plugged with benlante chips upon completion. This Log of Boring should not be used separately from the report to which it is attached.

Exide Technologies						I	og of Boring	j: 2012-FWC	S-3	
				<u> </u>	Completi	on Date:	1/19/2012	Drilling Method:	Hand Sampler	
l			g Cente	r	Drilling C	ompany:	NA	Borehole Diameter (in.):	2.25	
		Frisco, 1	X		Driller:		NA	Total Depth (ft):	2	
Driller						.icense:	NA	Northing:	7101904.02	
PBW Project No. 1755 Logged						Зу:	Christopher Moore, P.G.	Easting:	2479836.71	
	I BYV I TO COLING. I TO					Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	**	
Depth (ft)	Recovery (fb/ft)	OID (mdd)	Sample Interval				Des	nologic cription		
1	1.0/2.0	0.1	0-2	СH.	(0 - 2.0) CLAY, CH, very dark brown, moist, soft to firm, medium plasticity, some sand, staining or foreign material observed, no odor.					

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Notes:

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used seperately from the report to which it is attached.

	Exic	de Te	chnol	ogies		Log of Boring	j: 2012-FWC	S-4			
				<u></u>	Completion Date:	1/19/2012	Drilling Method:	Hand Sampler			
			ig Cente	Г	Drilling Company:	NA	Borehole Diameter (in.):	2.25			
		Frisco, T	IX		Driller:	NA	Total Depth (ft):	2			
					Driller's License:	NA	Northing:	7101885.93			
	PBW F	roiect N	lo. 1755		Logged By:	Christopher Moore, P.G.	Easting:	2479858.70			
	. =	,			Sampling Method:   2"x 2' Barrel   Ground Elev. (ft AMSL); -						
Depth (ft)	Recovery (fVft)	(mdd)	Sample Interval	uscs			nologic cription				
1 -	1.0/2.0	0.1	0-2	SH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, soft to firm, medium plasticity, some sand, no staining or foreign material observed, no odor.						

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Notes:
Borehole plugged with bentonite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

***************************************	Exi	de Te	chnol	ogies		Ţ	_og of Boring	յ։ 2012-FWC	S-5		
					Completion Date	e:	1/19/2012	Drilling Method:	Hand Sampler		
		ig Cente	Г	Drilling Compan	ıy:	NA	Borehole Diameter (in.):	2.25			
		ГХ		Driller:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	NA	Total Depth (ft):	2			
<b> </b>	Driller						NA	Northing:	7101863.34		
	PBW Project No. 1755						Christopher Moore, P.G.	Easting:	2479891.18		
	Sampl					od;	2"x 2' Barrel	Ground Elev. (ft AMSL);	~*		
Depth (ft)	Recovery (fl/ft)	OID (mdd)	Sample interval	USCS				ologic cription			
1	1.1/2.0	0	0-2	SH	(0 - 2.0) CLAY, CH, very dark brown, moist, soft to firm, medium plasticity, some sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.						

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Notes:
Boreholio plugged with bentorite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies			Log of Boring	j: 2012-FWC	S-6		
					Completion Date:		1/19/2012	Drilling Method:	Hand Sampler		
	Frisco Recycling Center Frisco, TX					mpany:	NA	Borehole Diameter (in.):	2.25		
	Frisco, TX				Driller:	O TRANSPORTED TO THE STATE OF T	NA	Total Depth (ft):	2		
	Driller						NA	Northing:	7101823.97		
	PBW Project No. 1755 Logge						Christopher Moore, P.G.	Easting:	2479944.65		
						Method:	2"x 2' Barrel	Ground Elev. (ft AMSL):	**		
Depth (ft)	Recovery (fl/ft)	Old (bbm)	Sample Interval	USCS				ologic cription			
1	0.9/2.0	0.1	0-2	GH	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, soft to firm, medium plasticity, some sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.						

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Notes:

Borehole plugged with bentonile chips upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-FWCS-7				
		Recyclir Frisco,	ig Cente	Γ	Completic Drilling Co	******************************	1/19/2012 NA	Drilling Method: Borehole Diameter (in.):	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Driller  Driller  PBW Project No. 1755  Logge						- <del>1</del>	NA NA Christopher Moore, P.G.	Total Depth (ft): Northing: Easting:	2 7101804.83 2479965.58	
Depth (ft)	Recovery (f/ff)	PID (mdd)	Sample Interval	uscs	Sampling	Method:		Ground Elev. (ft AMSL): ologic cription	<u> </u>	
1	1.3/2.0	0	0-2	<u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	(0 - 2.0) CLAY, CH, very dark brown, moist to wel, soft to firm, medium plasticity, sand, white crystalline material present on surface, no staining or foreign material observed below surface, no odor.					

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Notes: Borehole plugged with bentonite chips upon completion. This Log of Boring should not be used separately from the report to which  $\alpha$  is stached.

	Exi	de Te	chnol	ogies			Log of Boring	j: 2012-FWC	S-8		
-	Ericoo	Pogralia	a Conto		Completion Date:		1/18/2012	Drilling Method:	Hand Sampler		
	Frisco Recycling Center Frisco, TX					ompany:	NA	Borehole Diameter (in.):	2.25		
		riisco,	1.7		Driller:		NA	Total Depth (ft):	2		
					Driller's License:		NA	Northing:	7101745.75		
	PBW F	Project N	lo. 1755		Logged By:		Christopher Moore, P.G.	Easting:	2480046.41		
		,			Sampling Method:		2"x 2' Barrel	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (ft/ft)	OIG (mdd)	Sample Interval	USCS			Des	nologic cription			
1	1.5/2.0	0	0-2	Ğ.	(0 - 2.0) CLAY, CH, very dark brown, moist to wet, very soft, medium plasticity, no staining or foreign material observed, no odor.						

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Barehole plugged with bentonite chips upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-FWCS-9 **Exide Technologies** 1/18/2012 Completion Date: Drilling Method: Hand Sampler Frisco Recycling Center Frisco, TX Drilling Company: Borehole Diameter (in.): 2.25 NA Driller: NA Total Depth (ft): Driller's License: NA Northing: 7101706.18 2480100.38 Christopher Moore, P.G. PBW Project No. 1755 Logged By: Easting: Sampling Method: 2"x 2' Barrel Ground Elev. (ft AMSL) Recovery (f0ff) Lithologic Description Depth Sample USCS interval (ft) (0 - 2.0) CLAY, CH, very dark gray, wet, very soft, medium plasticity, no staining or foreign material observed, no odor. 0.5/2.0 0 0-2 1 2

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with benionite chips upon completion.

### Log of Boring: 2012-FWCS-12 **Exide Technologies** Completion Date: 3/15/2013 Drilling Method: DPT Frisco Recycling Center Frisco, TX Driller: Dan Spaust Borehole Diameter (in.): 2 Driller's License: 3038 Total Depth (ft): Northing: Field Supervisor: Will Vienne, P.G. 7102059.9189 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: 2479678.4051 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Lithologic Description Depth Sample USCS Interval (ft) (0 - 5.0) Silty CLAY, very dark gray, moderately abundant decayed plant material, common limestone granules, moist, soft, low plasticity. 0 1 2 2.7/4 2 - 2.7 3 4 1/1 4 - 5 5

## **PBW**

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Borehole plugged with bentonite chips upon completion.



### **LOG OF 2013-FWCS-12A**

DRILLING METHOD: Direct Push

\_\_\_\_\_

NORTHING: 7,102,086 FT

DATE/TIME: 01/13/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,682 FT

TOTAL DEPTH: 12 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		, ,			CL		0-1.0 FT, (CL) CLAY, some interbeds of silty clay; brown, tan mottling; dry, soft-firm.
-	1		<u>3.5</u> 4.0	2.0-2.7 (1105)			1.0-8.0 FT, (CH) CLAY; dark brown and black; dry, firm.
-5	2	NA	<u>4.0</u> 4.0		CH		6.5-7.0 FT, trace clayey silt, light brown. 6.75-7.25 FT, trace slag fragments, moist.
- 10	3		<u>4.0</u> 4.0		СН		8.0-10.5 FT, (CH) CLAY; black; moist, firm.
					CL		10.5-12.0 FT, (CL) CLAY, high plasticity, some sandy silt; wet, very soft.  11.75 FT, some gravel.
							End of borehole at 12 FT BGS.
-15							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Stewart Creek Corridor	REVIEWED BY:	JW

#### Log of Boring: 2012-FWFS-1 **Exide Technologies** DPT 3/4/2013 Drilling Method: Completion Date: Frisco Recycling Center Frisco, TX Borehole Diameter (in.): 2 Margarito Estrada Driller: Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7101762.3225 Northing: Field Supervisor: Will Vienne, P.G. 2479323.7294 Easting: PBW Project No. 1755 Logged By: Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Lithologic Depth Sample USCS Description Interval (ft) (0 - 5.0) CLAY, dark brownish gray, abundant limestone pebbles in clay matrix 0-0.5', trace Ō 0 - 0.5 limestone granules below 0.5', white precipitate-like material in fracture fills from 0-2', very dark gray organic clay at 3-5' with abundant decayed plant fragments, slightly moist to dry, low plasticity. 1 0.5 - 22 5/5 3 2 - 4 4 - 5

## $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

### Log of Boring: 2012-FWFS-1 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: DPT Frisco Recycling Center Frisco, TX Driller: Margarito Estrada Borehole Diameter (in.): 2 Total Depth (ft): Driller's License: 58164 Tim Jennings, P.G. Field Supervisor: Northing: 7101959.7756 PBW Project No. 1755 Logged By: Roberta Russell Easting: 2479787.6109 Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Recovery (#/ft) Depth Lithologic Description Sample USCS Interval (ft) (0 - 0.5) CONCRETE SLAB O (0.5 - 6.0) Silty CLAY, trace gravel from 0.5-1.7', dark reddish brown, trace calcareous nodules, moist, soft to hard, low plasticity. 1 2 5/5 3 4 4 - 5 5 1/1 5 - 6 6

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

### Log of Boring: 2013-FWFS-1A **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: DPT Frisco Recycling Center Frisco, TX Margarito Estrada Borehole Diameter (in.): 2 Driller: Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Field Supervisor: Northing: 7101951.4239 2479776.2769 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): -Depth Lithologic Sample USCS (ft) Interval Description 0 (0 - 3.5) FILL, gravel, gabion fill. 1 2 3/5 3 2 - 4 (3.5 - 5.0) Silty CLAY, dark reddish brown,~30% calcareous nodules and fine gravel from 4-5', wet, 5

## $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2012-FWFS-4 **Exide Technologies** DPT 4/29/2013 Drilling Method: Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Total Depth (ft): Driller's License: 7101873.4335 Will Vienne, P.G. Northing: Field Supervisor: Easting: Will Vienne, P.G. 2479897.671 Logged By: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery Old (mdd) Lithologic Depth Sample (#J#) USCS (ft) Interval Description (0 - 0.75) CONCRETE SLAB 0 CON (0.75 - 2.4) FILL, gravelly, sandy clay, dark gray and brownish gray, wet (possibly from concrete corer), limestone and granite gravel, unconsolidated. 1 FILL: 2 3/4 (2.4 - 5.0) CLAY, very dark gray, trace limestone granules, moist, soft, low to medium plasticity 3 123 3 - 4 1/1 258 4 - 5 5

## $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.



### **LOG OF 2013-FWFS-5A**

DRILLING METHOD: Direct Push

DATE/TIME: 01/13/2014, 0900
TOTAL DEPTH: 4 FT BGS

DRILLER: SCI, Margarito Estrada

RIG: Geoprobe

NORTHING: 7,101,844 FT

EASTING: 2,479,927 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
-	1		4.0 4.0	0-2 (0912)	CL		0-2.0 FT, (CL) CLAY, some silty clay, trace fine gravel; brown; dry, firm.
-	1		4.0	2-4 (0913)	СН		2.0-4.0 FT, (CH) CLAY; brown, trace yellowish mottling; dry, stiff.
-5		:					End of borehole at 4 FT BGS
-							
- - 10						1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
-							
_							
- - 15							
-							
-						And and a second as a second a	
	-						

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Treatment Bldg	REVIEWED BY:	JW

#### Log of Boring: 2012-FWFS-6 **Exide Technologies** 4/29/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Total Depth (ft): 58164 Driller's License: Northing: 7101811,8251 Will Vienne, P.G. Field Supervisor: Will Vienne, P.G. Easting: 2479976.3353 Logged By: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Lithologic PID (ppm) Depth Sample USCS Interval Description (ft) (0 - 0.75) CONCRETE SLAB 0 CON (0.75 - 2.5) FILL, clayey sand with moderately abundant pebble-sized limestone and granite gravel, mottled dark gray and brownish gray, wet (possibly from concrete corer). 1 FILE 2.3/4 (2.5 - 5.0) CLAY, very dark gray, very moist, soft, medium to high plasticity. 2 - 4 3 115 4 - 5 1/1 108 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-FWFS-7A						
	Frisco	Recyclir Frisco.	ng Cente	r	Completion Date: Driller:		5/21/2013 Dan Spaust	Drilling Method: Borehole Diameter (in.)	DPT 2			
		i lisco,	17		Driller's L	icense:	3038	Total Depth (ft):	5			
					Field Sur	pervisor:	Tim Jennings, P.G.	Northing:	7101766.6481			
	PBW Project No. 1755 Logged						Tim Jennings, P.G.	Easting:	2480011.6948			
		•			Sampling	Method:	4' Lined Tube	Ground Elev. (ft AMSL)	*			
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs	Lithologic Description								
1		0 - 0.5 0.5 - 2	GC	nodules.			•	st, firm, medium plasticity, ~5%	fine carbonate			
2	3/4	2-3	- MA	(1.5 - 2.6	6) Clayey	SILT, brow	n, wet, soft to firm, higi	h plasticity.				
3			/CL//	(2.6 - 3.0 in clay m (3.0 - 4.0	edium plasticity, ~30-40% fine t	o medium gravel						
4 -	1/1	4 - 5	- Will	(4.0 - 5.0) Clayey SILT, dark brown, wet, soft, high plasticity.								

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips upon completion.

	Exi	de Te	chnol	ogies			Log of Bori	ng: 2012-FWF	S-7B			
	Frisco	Recyclin Frisco, 1		r	Driller:	ion Date:	5/21/2013 Dan Spaust	Drilling Method: Borehole Diameter (in.)	DPT 2			
		1 (1300, 1	17		Driller's L	VANOT TO THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF THE TAXABLE PARTY OF TAXABLE PARTY OF TAXAB	3038	Total Depth (ft):	5			
					Field Sur		Tim Jennings, P.G.	Northing:	7101756.6481			
	PBW I	Project N	lo. 1755		Logged F	a Surrantamos comunica	Tim Jennings, P.G.	Easting:	2480011.6948			
	·····	·	,		Sampling	g Method:	4' Lined Tube	Ground Elev. (ft AMSL)	**			
Depth (ft)	Recovery (fl/fl)	Sample Interval	USCS		Lithologic Description							
0		0 - 0.5	/cl//	(0 - 0.3)	) - 0.3) Silty CLAY, dark brown, dry, hard, medium plasticity.  0.3 - 5.0) Silty CLAY/Clayey SILT, dark reddish brown, moist, wet below 2.5', firm to soft, high							
1	3/4	0.5 - 2		plasticity		A1/Clayey	SIL1, dark reddish brov	wh, moist, wet below 2.5 , 11rm	to son, nign			
3	0,4	2-3	CH/MH									
4	1/1	4 - 5										
5	17	4-3			••••							

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2012-FWFS-8 **Exide Technologies** Drilling Method: DPT 4/29/2013 Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7101748.9161 Field Supervisor: Northing: Will Vienne, P.G. 2480053.981 Logged By: Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Recovery (ff/ff) PID (mdd) Lithologic Depth Sample USCS (ft) Interval Description (0 - 0.75) CONCRETE SLAB ō CON (0.75 - 1.0) FILL, gravelly, clayey sand, reddish brown, very moist, unconsolidated, 1 pebble-sized limestone and granite gravel. (1.0 - 2.0) FILL, clay, very dark gray, moist, soft to firm, low to medium plasticity, abundant FILL slag at 1.8-2.0' (up to 1" diameter). 2 3.2/4 (2.0 - 5.0) CLAY, very dark gray, moist, soft, low to high plasticity, high plasticity below 4.0', silty from 2.0-4.0'. 3 203 2 - 4 СН 1/1 492 5

### $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### **Exide Technologies** Log of Boring: 2012-FWFS-9 Completion Date: 4/29/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Will Vienne, P.G. Northing: 7101720.026 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: 2480094.8122 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) Depth Old (mdd) Sample Lithologic USCS (ft) Interval Description 0 (0 - 0.75) CONCRETE SLAB CON (0.75 - 1.3) FILL, gravelly (pebble-sized), clayey sand, light brown, wet (possibly from 1 PLL concrete corer). (1.3 - 5.0) CLAY, very dark gray, very moist, soft, medium to high plasticity, strong hydrocarbon odor at 4-5'. 3.4/4 3 1361 2.5 - 4 1/1 1800 4 - 5 5

## $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Note

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: LMW-21 **Exide Technologies** 2/27/2013 Completion Date: Drilling Method: **HSA** Frisco Recycling Center **Drilling Company:** Borehole Diameter (in.): 7.75 Strata Core Services, LLC Frisco, TX Driller: Chris Combs Total Depth (ft): 56033 7103205.9759 Driller's License: Northing: 2480099.7956 Logged By: Tim Jennings, P.G. Easting: PBW Project No. 1755 645.11 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 648.28 Depth Well Recovery Lithologic USCS Sample (ft) Materials (ft/ft) Description 0-0.5 (0 - 1.1) Sandy, gravelly CLAY; wet, very soft, slow dilatancy, high plasticity clay, ~20-30% fine sand and fine gravel. 0.5-2 (1.1 - 7.9) Silty CLAY, dark gray, moist, firm to hard, no dilatancy, medium to high plasticity, trace carbonate gravel below 5'. 5.0/5.0 2-4 СĤ 4-5 5.0/5.0 (7.9 - 10.6) Clayey, gravelly SAND; light brown, fine to coarse sand, moist, soft to firm, medium plasticity clay, ~10-20% clay and ~10-20% fine to medium gravel. SW 10 (10.6 - 13.5) Clayey SILT, light brown, moist, soft to firm, slow dilatancy, medium plasticity. cí 5.0/5.0 (13.5 - 16.0) Gravelly, clayey SAND; light brown, fine to coarse sand, moist to wet, wet at 15.8-16', firm to soft, ~40-50% fine to medium gravel, ~5-10% clay above 15'. SW 15 (16.0 - 17.2) Sandy SILT, light brown, wet, soft, medium plasticity. ML (17.2 - 21.8) Sandy, gravelly CLAY; wet to dry, firm to hard, medium plasticity clay, 2.5/5.0 fine to medium gravel (~5-10%) and fine to coarse sand (~10-20%) in clay matrix. ĆĹ 20 (21.8 - 25.0) SHALE, brownish gray, dry, very hard. 2.2/5.0 SH 25 This log should not to be used separately from the report to which it is attached.

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Annular Materials

(0.0 - 2.0) Concrete (2.0 - 8.0) Bentonite Hole Plug (8.0 - 25.0) 20/40 Silica Sand

#### Well Materials

(+3.16 - 10.0) Casing, 2" Sch40 FJT PVC (10.0 - 25.0) Screen, 2" Sch 40 FJT PVC,

### **Exide Technologies**

# Log of Boring: LMW-22

Drilling Method:

**HSA** 

7102891.2829

2480355.4657

Frisco	Recycli	ng Center
	Frisco,	ΤX

		Diming mounds.	
Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
Driller:	Dan Spaust	Total Depth (ft):	20
Driller's License:	3038M	Northing:	7102
Logged By:	Roberta Russell	Easting:	2480
Field Supervisor:	Tim Jennings P.G	Ground Elev (ft AMSL):	643.3

2/27/2013

PBW Project No. 1755

Ground Elev. (ft AMSL): 643.32 Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 646.99

Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	Lithologic Description
0 -				0-0.5 0.5-2	(0 - 12.5) CLAY/Silty CLAY, dark reddish brown, yellowish brown from 9-12.5', moist, soft to firm, low to medium plasticity, ~10% calcareous nodules from 9-12.5'.
		4.5/5.0		2-4	
5 —		The state of the s		4-5	
-		4.4/5.0			
10 -		4.0/5.0	<b>CL</b>		(12.5 - 13.0) CLAY with gravel; yellowish brown, moist, soft, low plasticity, ~30-40% gravel in clay matrix. (13.0 - 16.0) Sandy CLAY, yellowish brown, moist, soft, low plasticity.
15 -		4.3/5.0			(16.0 - 17.0) Gravelly CLAY, yellowish brown, ~30-40% gravel in clay matrix.  (17.0 - 19.5) Silty CLAY, grayish brown with orange staining, very moist, soft to firm, low plasticity.
20 🕸			SH		(19.5 - 20.0) SHALE, gray, dry, hard, low to medium plasticity.

Completion Date:

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

This log should not to be used separately from the report to which it is attached.

#### Annular Materials

(0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hole Plug (2.5 - 20.0) 20/40 Silica Sand

#### Well Materials

(+3.67 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: 2013-MB-1 **Exide Technologies** Completion Date: DPT 3/14/2013 Drilling Method: Frisco Recycling Center Dan Spaust Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 3038 Total Depth (ft): 7101768.9942 Field Supervisor: Will Vienne, P.G. Northing: 2480378.5615 Will Vienne, P.G. Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Recovery (ff/ft) Lithologic Depth Sample USCS Description (ft) Interval (0 - 0.5) CONCRETE SLAB 0 CON (0.5 - 5.5) Silty CLAY, very dark brownish gray, slightly sandy at 0.5-2.5, moist, some perched water below concrete (may be from concrete corer). 0 - 2 1 3.3 2 4/4 3 1.6 4 - 5 1.5/1.5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-MB-2 **Exide Technologies** Completion Date: 3/14/2013 DPT Drilling Method: Frisco Recycling Center Frisco, TX Driller: Dan Spaust Borehole Diameter (in.): 2 Driller's License: 3038 Total Depth (ft): Field Supervisor: Will Vienne, P.G. Northing: 7101789.6858 Logged By: Will Vienne, P.G. 2480309.4631 PBW Project No. 1755 Easting: Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Depth PID (mdd) Lithologic Sample USCS (ft) Description Interval (0 - 0.5) CONCRETE SLAB ō CON (0.5 - 0.8) Road base material. (0.8 - 4.5) Silty CLAY, abundant silt, very dark gray, trace black staining, dry to moist, soft, low to no plasticity, refusal at 4.5'. ŢĶ 27.5 0 - 2 2 3.6/4 3 21.5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

# Golder

### LOG OF 2013-MB-3

DRILLING METHOD: Direct Push

t Pusn

NORTHING: 7,101,808 FT

DATE/TIME: 01/08/2014, 1215

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,461 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 30.1)				0.0-0.5 (1218) 0.5-2.0 (1222)	ML		0-0.75 FT, Concrete.  0.75-1.75 FT, (ML) SILT; dark brown; dry, soft.
	1	NA	<u>4.0</u> 4.0	2.0-4.0 (1225)	CH/CL		1.75-4.0 FT, (CH/CL) CLAY and SILTY CLAY; dark brown, layered; dry, firm.
-5				·			End of borehole at 4 FT BGS
_ 10						The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Maintenance Bldg	REVIEWED BY:	JW

# Golder Associates

### LOG OF 2013-MB-4

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,869 FT EASTING: 2,480,347 FT

DATE/TIME: 01/08/2014, 1515 TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

	No. despise						
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		0.6	·	0.08-1.3 (1515) 1.3-2.0	CL	4	0-0.8 FT, Concrete.  0.8-2.0 FT, (CL) SILTY CLAY; black; moist, stiff.
	1	0.5	<u>4.0</u> 4.0	1.3-2.0 (1518) 2.0-4.0 (1520)	СН		2.0-4.0 FT, (CH) CLAY; black; dry, stiff.
-5						1///	End of borehole at 4 FT BGS
						AND THE PARTY OF T	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Maintenance Bldg	REVIEWED BY:	JW

# Golder Associates

### LOG OF 2013-MB-5

DRILLING METHOD: Direct Push

EASTING: 2,480,355 FT

NORTHING: 7,101,720 FT

DATE/TIME: 01/08/2014, 1300 TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe

DRILLER: SCI, Margarito Estrada

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						0 4 0 0	0-0.5 FT, Concrete.
-	1	11.6	<u>0.8</u> 5.0	0-5 (1320)	CL		0.5-4.5 FT, (CL) SILTY CLAY; brown; dry, soft.
					SP	YMAA	4.5-5.0 FT, (SP) SAND, coarse; light brown; loose.
-5	2	76.5	<u>2.8</u> 5.0		CL		5.0-10.0 FT, (CL) SILTY CLAY; dark brown; damp, soft. 5.0 FT, gravel seam.
- 10							10.0-15.0 FT, (CL) CLAY, some silt, trace gravel; dark gray; wet, soft.
		42.3	,	10-12 (1335)			11.0 FT, moist.
	3		<u>5.0</u> 5.0		CL		
		18.0					
<b>– 15</b>		63.2					
		-		14-16 (1345)	ML/CL		15.0-17.0 FT, (ML/CL) SILT and CLAY, some sand and gravel; layered; wet, firm.
		60.7			WIL/OL		
	4	60.7	<u>5.0</u> 5.0		ML		17.0-18.5 FT, (ML) CLAYEY SILT, some gravel; alluvial; dry, firm.
		81.4		18-20 (1420)			18.5-20.0 FT, SHALE; dark gray, reddish brown mottling; dry, hard.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Maintenance Bldg	REVIEWED BY:	WL



### LOG OF 2013-MB-5

DRILLING METHOD: Direct Push

NORTHING: 7,101,720 FT

DATE/TIME: 01/08/2014, 1300

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,355 FT

TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe

DE	PTH eet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-(F	eet)	NO.	(PPM)	(Feet)	J, LL		2.00	End of borehole at 20 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Maintenance Bldg	REVIEWED BY:	WL

#### Log of Boring: 2013-MW10-1 **Exide Technologies** Drilling Method: DPT Completion Date: 3/5/2013 Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): 7101995.4879 Tim Jennings, P.G. Field Supervisor: Northing: 2480989.1399 Easting: Roberta Russell Logged By: PBW Project No. 1755 Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Lithologic Depth (∰) Sample USCS Description Interval (ft) (0 - 3.0) CLAY, dark reddish brown, moist, soft, medium to high plasticity. 0 0 - 0.51 0.5 - 22 5/5 3 (3.0 - 5.0) Clayey SILT, dark reddish brown, calcareous nodules (10%), slightly moist, hard, low plasticity. ML. 4 4 - 5

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

	Exi	de Te	chnol	ogies		I	og of Bor	ring: 2013-MW	10-2		
					Completion Da	ate:	3/5/2013	Drilling Method:	ÐPT		
	Frisco	Recyclin		r	Driller:	00/20	Margarito Estrada	Borehole Diameter (in	.): 2		
		Frisco, 7	X		Driller's Licens	e:	58164	Total Depth (ft):	5		
					Field Supervise	or:	Tim Jennings, P.G.	Northing:	7101953.2098		
	PBW	Project N	lo. 1755		Logged By:	**************************************	Roberta Russell	Easting:	2480965.5869		
		,			Sampling Meth	hod:	5' Lined Tube	Ground Elev. (ft AMSL	); **		
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS		Lithologic Description						
0		0 - 0.5	OF ILE	(0 - 0.2)	FILL, sand, dar	k red	dish brown, moist, so	1.			
1 -		0.5 - 2		(0.2 - 4.4 plasticity		ark re	eddish brown, calcare	ous nodules from 2.5-4.5', moi	st, soit to iirm, low		
3	5/5	2 - 4	<b>c</b> t								
5		4 - 5	ML	(4.5 - 5.	0) Sandy SILT, 1	trace	medium gravel, light	yellowish brown, calcareous, s	slightly moist, soft.		

### $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

### Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-MW10-3 **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Driller's License: Total Depth (ft): Tim Jennings, P.G. 7101988.5518 Northing: Field Supervisor: Easting: Logged By: Roberta Russell 2480897.199 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample USCS (ft) interval Description ō (0 - 0.4) FILL, silty clay with sand and gravel, red Fe-ox staining, plastic chip present, moist, soft, 0 - 0.5 FILL low plasticity. (0.4 - 5.0) Clayey SILT/SILTY clay, dark reddish brown, calcareous nodules from 2.6 - 5', moist, soft to firm, low plasticity. 1 0.5 - 2 2 5/5 2 - 4 3 4 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### **Exide Technologies** Log of Boring: 2013-MW-17A 3/15/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): Field Supervisor: Will Vienne, P.G. Northing: 7102073.3953 PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting: 2479606.9524 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Sample Lithologic USCS Interval Description (ft) (0 - 5.0) Silly CLAY, very dark gray, dark brownish gray with increased silt below 4', soft to slightly firm, low plasticity, moderate to abundant decayed plant material, trace limestone granules and 0 0 - 0.5 1 0.5 - 22 4/4 3 2 - 4 1/1 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

Golder
Associates

TOTAL DEPTH: 4 FT BGS

### LOG OF 2013-MW-17B

DRILLING METHOD: Direct Push

DATE/TIME: 01/10/2014, 1145

DRILLER: SCI, Margarito Estrada

RIG: Geoprobe

NORTHING: 7,102,077 FT

EASTING: 2,479,603 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1151)	ML		0-1.0 FT, (ML) CLAYEY SILT; dark brown; dry, stiff.
	1	NA	<u>3.3</u> 4.0		CL		1.0-4.0 FT, (CL) SILTY CLAY; dark gray, reddish mottling, friable; dry, hard.
							End of borehole at 4 FT BGS.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	NW of Battery Storage Bldg	REVIEWED BY:	JW

#### Log of Boring: MW-19 **Exide Technologies HSA** Completion Date: 1/12/2012 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 8.25 **Drilling Company:** StrataCore Frisco, TX Mario Robles Driller: Total Depth (ft): 22 7102589.0425 Driller's License: 52694 Northing: 2481314.6445 Logged By: Christopher Moore, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 650.33 Sampling Method: 3"x 5' Barrel Recovery (ft/ft) Depth Well Lithologic USCS (ft) Materials Description (0 - 6.0) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace gravel. 0 2.0-3.5: with limestone gravel. 3.0/5.0 5 (6.0 - 19.2) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity. 3.7/5.0 9.5: wire fragment, possible fill/reworked material above. CH 10 Below 10.0: fractured, orange staining along fracture planes. 11.5-12.0: gravelly, moist to wet. 3.9/5.0 13.0-13.2: silty/gravelly, moist to wet. 13.9-14.2: gravelly, moist to wet. 15 4.5/5.0 (19.2 - 22.0) SHALE, dark gray, moist, hard, laminated, fissle. 20 SH 2.0/2.0



Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Boring location hand probed to 5 feet to check for utilities.

Initial Fluid Level (1/16/12)

Depth to water: 15.58 ft BG\$

This Log of Boring should not be used seperately from the report to which it is attached.

Annular Materials

(0.0 - 1.0) Concrete (1.0 - 5.0) Bentonite Hole Plug (5.0 - 22.0) 20/40 Silica Sand

Well Materials (+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC (7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot TOC Elevation (ft AMSL)

653.34

#### **Exide Technologies** Log of Boring: MW-20 1/12/2012 Completion Date: **Drilling Method: HSA** Frisco Recycling Center Borehole Diameter (in.): 8.25 **Drilling Company:** StrataCore Frisco, TX Mario Robles Total Depth (ft): 22 Driller: 7101791.617 52694 Driller's License: Northing: 2481082.2078 Logged By: Christopher Moore, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 641.73 Sampling Method: 3"x 5' Barrel Recovery (ft/ft) Well Depth Lithologic USCS Materials (ft) Description (0 - 15.5) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no odor, no staining or foreign material observed. 5.0/5.0 3.0-.3.9: some gravel size carbonate nodules. 5 4.0/5.0 10 5.0/5.0 15 (15.5 - 19.7) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity, fractured, orange staining along fracture planes. 4.5/5.0 (19.7 - 22) SHALE, dark gray, moist, hard, laminated, fissle. 20 SH 2.0/2.0

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Boring location hand probed to 5 feet to check for utilities.

Initial Fluid Level (1/16/12) Depth to water: 21,05 ft BGS

This Log of Boring should not be used seperately from the report to which it is attached.

Annular Materials

(0.0 - 1.0) Concrete (1.0 - 5.0) Bentonite Hole Plug (5.0 - 22.0) 20/40 Silica Sand

Well Materials (+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC (7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot TOC Elevation (ft AMSL)

644.7

	Exide	Techn	ologi	es			Log of Borin	ng: <b>MW-2</b> 1		
			***************************************		Comp	letion Date:	3/5/2013	Drilling Method:	HSA/DPT	
	Frisco Rec		nter		Drillin	g Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75	
	Frisc	co, TX			Driller	± 1000000000000000000000000000000000000	Dan Spaust	Total Depth (ft):	15	
			<u></u>		Driller	's License:	3038M	Northing:	7102518.8983	
: [	DOM/ Design	No. 17			Logge	ed By:	Tim Jennings, P.G.	Easting:	2480490.8249	
ı	PBW Proje	CI NO. 17	55			Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):		
				أحسببين	Samp	ling Method;	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	635.99	
Depth (ft)	Well Materials	Recovery (ft/ft)	uscs	Sam	. 1		Lithol Descri	ption		
O		3,8/5,0	<b>C</b> L	0.5	(0 - 1.0) Silty CLAY, light grayish brown, abundant orange staining (iron oxide soft, low to medium plasticity.     (1.0 - 4.0) Gravelly CLAY, light brownish orange, very moist, soft to firm, low particular constructions.					
5			/cH/	4-:	(4.0 - 5.0) CLAY, light grayish brown, abundant orange staining (iron oxide hard, medium to high plasticity.					
3		2.5/2.5	.5		1	0-30% fine to 5.5 - 10.5) Sil	velly CLAY, light brown and o medium gravel in clay matrix ty CLAY, light brown, orange vily weathered shale.			
40		2.5/2,5	CL							
10		2.5/2.5	<u> </u>			10.5 - 15.0) S	sHALE, gray, moist, hard, wea	ihered shale.	ACCA, CALLOS ANTE RESERVATION OF THE PROPERTY	
15		2.5/2.5	<b>SH</b>							

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes: This log should not to be used separately from the report to which it is attached.

Annular Materials (0.0 - 1.0) Concrete (1.0 - 2.5) Bentonite Hole Plug (2.5 - 15.0) 20/40 Silica Send

Well Materials (+2.33 - 3.0) Casing, 2" Sch 40 FJT PVC (3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0,010 slot

#### Log of Boring: MW-22 **Exide Technologies HSA/DPT** Completion Date: 3/5/2013 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 7.75 Drilling Company: Strata Core Services, LLC Frisco, TX Driller: Dan Spaust Total Depth (ft): 15 7102440.5654 Driller's License: 3038M Northing: 2480046.6732 Easting: Tim Jennings, P.G. Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 633.29 Tim Jennings, P.G. Field Supervisor: 636.89 Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): Depth Well Lithologic Recovery uscs Sample (ft/ft) Description (ft) Materials (0 - 1.5) Gravelly CLAY, light grayish brown, abundant orange staining (iron oxide), 0-0.5 moist, soft, low plasticity. 0,5-2 (1.5 - 3.0) Silty CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low plasticity. 3.5/5.0 (3.0 - 5.0) Gravelly CLAY, light grayish brown, abundant orange staining (iron oxide), moist, soft, low plasticity. 4-5 5 (5.0 - 7.7) Silty CLAY, light brown, orange and gray, moist, firm, medium plasticity. 1.0/2.5 (7.7 - 12.3) SHALE, gray, brown and orange; moist, firm, weathered. 2,5/2,5 10 2,5/2,5 SH (12.3 - 15.0) SHALE, gray, dry, hard. 2,5/2,5

### **PBW**

15

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

This log should not to be used separately from the report to which it is attached.

Annular Materials (0.0 - 1.0) Concrete (1.0 - 2.5) Bentonite Hole Plug (2.5 - 15.0) 20/40 Silica Sand Well Materials (+3.6 - 3.0) Casing, 2" Sch 40 FJT PVC, (3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

					Completion Date	3/5/2013	Drilling Method:	HSA/DPT	
	Frisco Recy		nter		Drilling Company	Strata Core Services, LLC	Borehole Diameter (ii	n.): 7.75	
	Frisc	o, TX		ľ	Driller:	Dan Spaust	Total Depth (ft):	20	
					Driller's License:	3038M	Northing:	7102124.8425	
				ľ	Logged By:	Tim Jennings, P.G.	Easting:	2480769,4386	
	PBW Proje	ct No. 1/	55		Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMS		
				Ţ,	Sampling Method	l: 5' Split Spoon/5' Samp Tu	be TOC Elev. (ft AMSL):	644.15	
Depth	Well	Recovery	USCS	Samp	le l		ologic		
(ft)	Materials	(ft/ft)	0000				cription		
0	F21 831			0.0.5		, surficial fill not associated w			
.0.			FILL	0.5-2	0 3 - 2 6) F	s or trash) observed, sand with LL, surficial fill not associated	with NDA, no foreign ob	iecis (e.a. slaa.	
				0,0	battery chips	or trash) observed, silty clay/	clayey silt, trace gravel,	dark reddish brow	
w	17.77	5.0/5.0	8888	}	moist, firm, I	ow plasticity.			
		0.0,0.0		2-4		layey SILT, dark reddish brow	n, dry, hard, low plasticit	y, ~15% calcareou	
					nodules.				
-4/			ML	4 -			•		
5				4-5	, m, ma				
Ū	13411		777777		/5.5 10\ Sil	ty CLAY, light brown, moist, s	oft to firm, high plasticity	~10_15%	
						odules in clay matrix (based o		, 10 1570	
				1		,	• /		
	1::#::1	0.5/5.0							
100				1					
			//cs//	1					
10 ~					/10 12 2) (	Gravelly, sandy CLAY; light bro	wa maiat ta wat -20 3	00/ fine to modium	
		,				10-20% fine to medium sand		0 /6 mile to mediam	
		2,5/2,5		1	g, _ 1 0 1	TO 2070 MILO TO MEDICAL COMP	,		
				4		Silty CLAY, light brown, oran	ge and gray, moist, firm	to hard, laminated	
					possibly hea	vily weathered shale.			
	1.4:	2.5/2.5							
**			CLICH						
15 ~			////						
•				1					
					(16.2 17.7)	SHALE, light brown, orange	and grav moist firm frie	thle and weathers	
					(10.2 - 11.1)	or area, agait prover, or ange	and Anal, mosts mill me	mig mim tripusticiti	
		4,5/5.0							
			SH		(17.7 - 20.0)	SHALE, gray, moist, hard.			
	F::8::4		J						

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes: This log should not to be used separately from the report to which it is attached.

Annular Materials
(0.0 - 2.0) Concrete
(2.0 - 3.5) Bentonile Hole Plug
(3.5 - 19.5) 20/40 Silica Sand
(19.5 - 20.0) Sloughed Material

Well Materials (-.17 - 4.5) Casing, 2" Sch 40 FJT PVC (4.5 - 19.5) Screen, 2" Sch 40 FJT PVC, 0.010 stol

#### Log of Boring: MW-24 **Exide Technologies HSA/DPT** 3/5/2013 Drilling Method: Completion Date: Frisco Recycling Center Borehole Diameter (in.): 7.75 Strata Core Services, LLC **Drilling Company:** Frisco, TX Driller: Dan Spaust Total Depth (ft): 7102133.0317 3038M Northing: Driller's License: Tim Jennings, P.G. 2479613.4306 Logged By: Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 639.62 Tim Jennings, P.G. Field Supervisor: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 642.96 Sampling Method: Well Lithologic Depth USCS Sample (ft/ft) Description (ft) Materials 0-0.5 (0 - 5.0) Silty clay/clayey silt FILL, moist, firm, low plasticity, dry and very hard 3-5". 0.5-2 5,0/5.0 2-4 4-5 (5.0 - 12.8) Gravelly clay FILL, dark brown and dark grayish brown, light brown 7.5-9.5, moist, firm to hard, medium to high plasticity, ~5-10% fine to coarse gravel fill, large 5 1.5/2,5 carbonate cobbles at 11'. 2,5/2.5 10 1.5/2.5 (12.8 - 15.9) Sandy clay FILL; dark reddish brown, moist, hard, low plasticity clay, iron oxide staining, very stiff. 2.5/2.5 15 (15.9 - 18.5) Silty, sandy CLAY; dark reddish brown, trace iron oxide staining, moist, 1.5/2.5 firm, medium plasticity, increasing moisture downward. Ć (18.5 - 20.2) Clayey SILT, dark brown, wet, soft, high plasticity. 2.5/2.5 MH 20 (20.2 - 23.1) Silly CLAY, grayish brown, moist to wet, firm, <5% fine calcareous nodules, wet sand interbedded at 22.5-22.6'. 3.0/3.0 CH (23.1 - 23.7) Clayey SAND, brown, wet, soft, sub-rounded sand, ~10-20% clay in fine SW 1.0/2.0 to coarse sand. (23.7 - 27.5) Gravelly CLAY, light brown to brown, wet, firm, sub-rounded gravel, medium plasticity clay, ~30-40% fine gravel in clay matrix, sandy gravel 27.3-27.5'. 25 1.0/2.5 (27.5 - 28.4) SHALE, light brown, orange and gray, abundant iron oxide staining, 1.5/1.5 SH weathered. (28.4 - 29.0) SHALE, gray, dry, very hard. This log should not to be used separately from the report to which it is attached. Annular Materials Well Materials Pastor, Behling & Wheeler, LLC (0.0 - 2.0) Concrete (2.0 - 12.0) Bentonite Hole Plug (12.0 - 29.0) 20/40 Silica Sand (+3.34 - 14.0) Casing, 2" Sch 40 FJT PVC (14.0 - 29.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Log of Boring: MW-25 **Exide Technologies** Drilling Method: HSA Completion Date: 2/27/2013 Frisco Recycling Center Borehole Diameter (in.): 7.75 **Drilling Company:** Strata Core Services, LLC Frisco, TX Driller: Chris Combs Total Depth (ft): 7101782.1994 56033 Northing: Driller's License: 2479376.8891 Roberta Russell Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 633.36 Tim Jennings, P.G. Field Supervisor: TOC Elev. (ft AMSL): 635,85 Sampling Method: 5' Split Spoon Lithologic Depth Well Recovery USCS Sample (ft) Materials (ft/ft) Description (0 - 20.0) Silty CLAY/Clayey SILT, dark reddish brown, moist, soft to firm, low plasticity, very moist at 13.5 to 15.0', gravelly clay lenses in very moist calcareous clay at 15.5-15.6', 16.5-16.7', 17.5-17.9'. 0 5.0/5,0 5 5.0/5.0 10 CLIMI 5,0/5,0 15 5,0/5,0 (20.0 - 20.5) GRAVEL with clay; wet, soft, low plasticity clay (~20% clay). (20.5 - 21.0) SHALE, dry, hard. (21.0 - 22.0) No recovery 20 GC 1.0/1.0 NR 0,0/1,0

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Notes:

This log should not to be used separately from the report to which it is attached.

(0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Grout (2.0 - 4.0) Bentonite Hole Plug (4.0 - 22.0) 20/40 Silica Sand

Well Materials

(+2.49 - 7.0) Casing, 2" Sch 40 FJT PVC (7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

***************************************	Exide					Log of Borii		:
	Edua Bua	O-			Completion Date:	3/6/2013	Drilling Method:	HSA
	Frisco Rec		enter	B	Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.)	.4
	FIIS	co, TX			Driller:	Dan Spaust	Total Depth (ft):	15
					Driller's License:	3038M	Northing:	7101865.0034
	PBW Proje	ct No. 17	755	Į.	Logged By:	Tim Jennings, P.G.	Easting:	2479876.33
	FBW Floje	CLING. 11	55		Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL)	
					Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	631.93
Depth (ft)	Well Materials	Recovery (ft/ft)	uscs	Samp	ole	Lithol Descri		
0	रशंबरद्यावाठ देवेक १४४	1 (			(0 - 1.0) Sandy	/ CLAY, light reddish brown, r		
				1				
				1	(1.0 - 5.0) Silly	CLAY, dark reddish brown, m, low plasticity.	trace iron oxide orange s	taining, moist, v
	17.77			4	at 3, soil to iiii	m, low plasticity.		
		4.0/5.0	//CL//	1				
	13.73	1		1				
	77.77.			1				
				1				
5			MA	1	(5.0 - 9.4) Silty	CLAY, brown, moist to wet,	firm, high plasticity.	
				4				
		1,5/2,5		7				
,			CH	4				
				4				
4				4				
		2.5/2.5		4				
			HHH.	4	/9.4 - 10.8) Gr	avelly CLAY, brown, moist to	wet, firm, medium plastic	ity clay, ~20-40
10				1	fine to medium			,,
				4		Ell. (2) AV Kalal has an ond or	and laminated with tena	n iran avida
		1.5/2,5	//ÇL//	1	(10.8 - 13.0) S	filty CLAY, light brown and or t to wet, firm, medium plastic	ange, iaminateu with trac V	e itali oxide
*		90-0			Stanning, moisi	to not, min, mosion placeo	7:	
	a a* 113 11 <b>a</b> 3	Pro-contraction (Contraction Contraction C	W///	4				
	1 1: 13:4			A.	SCARAGO COMO COMO COMO COMO COMO COMO COMO CO			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
,			Sanda Sandardini manana		(13.0 - 15.0) S	SHALE, gray, orange and light data 14.5 to 15', low plasticity	t prown, trace iron oxide i	above 14', dry,

# PBW

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Notes: This log should not to be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrele (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand

Well Materials (+3.59 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: MW-27 **Exide Technologies** HSA/DPT Completion Date: 3/6/2013 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 7.75 Strata Core Services, LLC Drilling Company: Frisco, TX Driller: Dan Spaust Total Depth (ft): Driller's License: 3038M Northing: 7101675.2344 2480260.288 Tim Jennings, P.G. Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 629.89 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 633.42 Depth Well Lithologic Recovery USCS Sample (ft/ft) Description Materials (ppm) (ft) (0 - 2.5) Silty CLAY, dark reddish brown, moist, soft, low to medium 0-0.5 plasticity, moderate hydrocarbon odor below 1'. 0.1 4.5/5.0 (2.5 - 5.0) Silly CLAY, yellowish brown, wet, very soft, low to medium 2-4 plasticity, trace sand, some black staining, moderate hydrocarbon odor. 0.3 4-5 5 (5.0 - 7.0) Sandy, clayey SILT; gray, moist to wet, soft, high plasticity clay, <5% fine gravel, moderate hydrocarbon odor. 125.4 2,5/2,5 (7.0 - 8.0) Silty CLAY, gray, moist to wet, soft, high plasticity, trace 65 calcareous nodules, moderate hydrocarbon odor. (8.0 - 11.5) Sandy, gravelly CLAY; gray, moist to wet, locally wet, firm, high plasticity clay, ~10-20% fine to medium sand, ~5-10% fine gravel. 2.5/2.5 13 10 0,5 2.5/2.5 (11.5 - 13.4) Gravelly CLAY, gray, moist, firm, medium plasticity clay, ~20-40% fine to medium gravel in clay matrix. 0.5 (13.4 - 14.6) SHALE, gray and orange, moist, hard, low plasticity, 2.5/2.5 1.8 weathered. (14.6 - 15.0) SHALE, gray, dry, hard. 15

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This boring log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand

Well Materials ууон Matchais (+3.53 - 5.0) Casing, 2" Sch 40 FJT PVC, (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot



### **LOG OF MW-27A**

DRILLING METHOD: Hand Auger

DATE/TIME: 01/09/2014, 0915
TOTAL DEPTH: 4 FT BGS

DRILLER: SCI, Margarito Estrada

RIG: Hand Auger

NORTHING: 7,101,708 FT

EASTING: 2,480,181 FT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	l l
					ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown; dry, firm.
-	1	1.0	<u>4.0</u>	0-2 (0925)	CL		0.5-2.0 FT, (CL) SILTY CLAY; dark brown; dry, firm.
	'	0.2	4.0 4.0 2-4 (0930)		СН		2.0-4.0 FT, (CH) CLAY; dark brown; dry, firm.
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	MW-27	REVIEWED BY:	JW

Golder
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### LOG OF MW-27B

DRILLING METHOD: Hand Auger

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,702 FT EASTING: 2,480,230 FT

DATE/TIME: 01/09/2014, 0845
TOTAL DEPTH: 4 FT BGS

RIG: Hand Auger

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		0.0		0-2 (0855)	ML		0-1.5 FT, (ML) CLAYEY SILT; dark brown; dry, soft.  1.5-2.0 FT, (CL) SILTY CLAY, trace fine gravel; dark brown; dry, firm.
	1		<u>4.0</u> 4.0		CL		2.0-2.5 FT, (GP) SANDY GRAVEL; gray; damp, compact.
			4.0		GP		2.5-4.0 FT, (CH) CLAY, trace fine gravel; dark brown; dry, stiff.
		8.0		2-4 (0900)	СН		
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	MW-27	REVIEWED BY:	JW

### LOG OF MW-27C

DRILLING METHOD: Hand Auger

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,695 FT EASTING: 2,480,287 FT

DATE/TIME: 01/08/2014, 1615 TOTAL DEPTH: 2 FT BGS

RIG: Hand Auger

	DEPIH: A				TIBIIO AU	T		
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS	
-	1	0.5	2.0 2.0	0-2 (1620)	ML		0-2.0 FT, (ML) CLAYEY SILT; brown; dry, firm.	
							End of borehole at 2 FT BGS	
-5								
-				3				
_ _ _ 10								
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_						11.1		
- 15 -								
DRC	DJECT No	: 130-20	86				COMPILED BY: BEF	

PROJECT No:	130-2086		
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	MW-27	REVIEWED BY:	JW
LOCATION:	10100-27		

Coldor
Golder
Associates

### LOG OF MW-27D

DRILLING METHOD: Hand Auger

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,691 FT

EASTING: 2,480,338 FT

TOTAL DEPTH: 4 FT BGS

DATE/TIME: 01/08/2014, 1545

RIG: Hand Auger

IOTALL	JEP I H.	4 FT BGS		KIG	Hand Au	gei	SURFACE ELEVATION. N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
						4 4 4 4	0-0.5 FT, Concrete.
					CL/GC		0.5-1.0 FT, (CL/GC) GRAVELLY CLAY, some sand; light brown; wet, soft.
-		0.8		0-2 (1545)			1.0-4.0 FT, (CL) CLAY, trace gravel; black; moist, soft.
				(1545)			
	1		<u>4.0</u> 4.0				
					CL		
-		0.4		2.4			
				2-4 (1550)			·
							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	 COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	MW-27	REVIEWED BY:	JW

### **LOG OF MW-27E**

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,667 FT EASTING: 2,480,260 FT

Margarito Estrada EASTING

SURFACE ELEVATION: N/A

DATE/TIME: 01/13/2014, 0845
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

TOTAL D	DEPTH:	4 FT BGS		RIG:	Geoprob	е	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
_				0-1 (0842)	CL		0-1.5 FT, (CL) CLAY, some layered silty clay; brown; slightly moist, soft-firm.
	1	NA	<u>4.0</u> 4.0	1-2 (0843) 2-3 (0844)	СН		1.5-4.0 FT, (CH) CLAY, trace fine gravel; brown; dry, firm.
_				(0844)			End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	וסו
LOCATION:	MW-27	REVIEWED BY:	JW

#### Log of Boring: MW-28 **Exide Technologies** Drilling Method: HSA Completion Date: 2/27/2013 Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 Drilling Company: Frisco, TX Total Depth (ft): Chris Combs 20 Driller: Northing Driller's License: 56033 7102977.6985 Logged By: Roberta Russell Easting: 2479831.956 PBW Project No. 1755 Ground Elev. (ft AMSL): 639.47 Tim Jennings, P.G. Field Supervisor: TOC Elev. (ft AMSL): Sampling Method: 5' Split Spoon Lithologic Well Depth Recovery USCS Sample (ft) Materials (ft/ft) Description (0 - 10.8) Sitty CLAY/Clayey SILT, dark reddish brown, soft to firm, low to medium O plasticity, calcareous nodules starting at 7.5'. 5,0/5.0 5 CUMU 5.0/5.0 10 (10.8 - 13.5) Gravelly CLAY, yellowish brown, moist, wet at 12.8', soft to firm, low to medium plasticity clay, calcareous nodules, $\,\sim\!10\%$ gravel in clay matrix.

calcareous nodules.

medium plasticity.

(19.5 - 20.0) SHALE, dry, hard.

4.2/5.0

5,0/5.0

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This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hote Plug (2.5 - 20.0) 20/40 Siica Sand

Well Materials

(13.5 - 16.5) Sandy CLAY, yellowish brown, wel, soft to firm, low plasticty clay,

(16.5 - 19.5) Silty CLAY/Clayey SILT, yellowish brown, moist, soft to firm, low to

(+3.44 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: MW-29 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: HSA/DPT Frisco Recycling Center Borehole Diameter (in.) 7.75 Drilling Company: Strata Core Services, LLC Frisco, TX Total Depth (ft): Dan Spaust Driller: 3038M Northing: 7101741.6829 Driller's License: 2480041.8696 Logged By: Tim Jennings, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 629.39 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 633.51 Lithologic Depth Well Recovery USCS Sample (ft) Materials (ft/ft) Description (0 - 5.0) Silly CLAY/Clayey SILT, dark reddish brown, orange from oxide staining from 0-0.5 0-0.5', moist, wet at 4', firm to hard, low plasticity, clayey gravel lens from 2.6-2.7'. 0.5-2 5.0/5.0 CLIMIL 2-4 4-5 5 (5.0 - 8.0) Silly CLAY, dark grayish brown, moist to wet, firm, high plasticity, fine to medium gravel in silty clay matrix at 5-5.8'. 2,5/2,5 (8.0 - 11.4) Silty CLAY, light brown, moist, firm, high plasticity, <5% fine gravel. 1,5/2,5 10 1.5/2,5 (11.4 - 14.0) SHALE, gray and orange, trace iron oxide, moist, firm to hard, medium plasticity, weathered. SH 2.5/2,5 (14.0 - 15.0) SHALE, gray, dry, hard.

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This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 14.5) 20/40 Silica Sand (14.5 - 15.0) Sloughed Material

Well Materials

(44.12 - 4.5) Casing, 2" Sch 40 FJT PVC (4.5 - 14.5) Screen, 2" Sch 40 FJT PVC, 0.010 stol

Golder
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### **LOG OF MW-29A**

DRILLING METHOD: Direct Push

NORTHING: 7,101,747 FT

DATE/TIME: 01/13/2014, 0845

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,032 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

	<u> </u>		,	NG	Geoproc		SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	,		4.0	0.0-0.5 (0852)	CL		0-2.0 FT, (CL) CLAY, some layered silty clay; brown; dry, soft-firm.
_	1	NA	4.0 4.0		CL/GC		2.0-3.0 FT, (CL/GC) gravelly SILTY CLAY; brown; moist, firm.
					СН		3.0-5.0 FT, (CL) CLAY; dark brown; dry, firm. 4.0 FT, soft.
-5	2		<u>1.0</u> 1.0				
5							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Treatment Bldg	REVIEWED BY:	JW

#### Log of Boring: MW-30 **Exide Technologies** Completion Date: 3/28/2013 Drilling Method: HSA Frisco Recycling Center Drilling Company: Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Driller: Dan Spaust Total Depth (ft): 32.5 7102086.1889 3038M Driller's License: Northing: Easting: 2480011.0566 Tim Jennings, P.G. Logged By: PBW Project No. 1755 645.483805 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 645.148475 Well Depth Lithologic Recovery uscs Sample Materials (ft/ft) Description (ft) (0 - 0.5) Sandy Gravelly CLAY, dark grayish brown, moist, firm, medium plasticity, ~10-20% fine to coarse sand, ~20-30% fine to coarse gravel and cobbles (railroad 0-0.5 0 0.5-2 (0.5 - 5.0) No Recovery 0.5/5 NR 2-4 4-5 5 (5.0 - 20.9) FILL, silty clay, dark grayish brown, moist to wet, soft, medium to high plasticity, trace of fine gravel, 1.3/5 10 1/2.5 2.5/2.5 15 2/5 20 2.5/2.5 (20.9 - 26.5) FILL, gravelly clay, light brown, wet, soft, high plasticity, ~30-40% fine gravel in clay matrix, wood fragments locally to 25'. 2.5/2.5 25 2.5/2.5 (26.5 - 28.5) FILL, gravelly clay, wet, firm to hard, medium plasticity, ~40-50% fine to medium gravel in clay matrix, pieces of stag/lead at 28', shell fragments at 28-28.5'. 2,5/2,5 (28.5 - 30.5) SHALE, gray and orange, abundant fe ox staining, wet, hard, medium 30 SH (30.5 - 32.5) SHALE, gray, moist, no cementation, very hard. 2.5/2.5 Notes: This log should not to be used separately from the report to which it is attached.

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Annular Materials (0.0 - 2.0) Concrete (2.0 - 10.0) Bentonite Hole Plug (10.0 - 32.5) 20/40 Sifica Sand

Well Materials

(0 - 12.0) Casing, 2" Sch 40 FJT PVC (12.0 - 32.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

# Golder

### **LOG OF MW-30A**

DRILLING METHOD: Direct Push

DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,080 FT

EASTING: 2,480,016 FT

DATE/TIME: 01/09/2014, 1500
TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

		4 - 1 - 1 - 1 - 1		KIG.	Geoplon	1 1	SURFACE ELEVATION. IN/A
DEPŢH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
and a second			2.2		GP/SP		0-1.0 FT, (GP/SP) SANDY GRAVEL, sub-angular; brown; moist, loose.  1.0-2.0 FT, (CH) CLAY; dark brown; moist, soft.
_	1	NA	<u>3.3</u> 4.0	2-4 (1508)	СН		2.0-4.0 FT, (CH) CLAY; black; dry, stiff.
-5							End of borehole at 4 FT BGS
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- 10 -				117000000		OME AND A STATE OF THE ADDRESS OF TH	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Battery Breaker Bldg	REVIEWED BY:	JW

#### Log of Boring: MW-31 **Exide Technologies** Completion Date: 5/9/2013 Drilling Method: HSA Frisco Recycling Center Borehole Diameter (in.) 7.75 Drilling Company: Strata Core Services, LLC Frisco, TX Total Depth (ft): Driller: Margarito Estrada 7102001.9818 58164 Northing: Driller's License: 2479800.4009 Logged By: Tim Jennings, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 637.17 Field Supervisor: Tim Jennings, P.G. Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 636.71 Depth Well Lithologic Recovery USCS Sample Description (ft/ft) (ft) Materials (0 - 0.9) CONCRETE SLAB CON (0.9 - 5.8) FILL, clayey sand and sandy clay, orange, trace iron oxide nodules. 0.9-2 4/5 FILL 5 (5.8 - 8) FILL, silty clay, trace fine gravel, moist to wet, dark brown, trace battery chips at 5.8-8', wet at 9.5', slag observed. 5.6-8 5/5 (8 - 16) Silty clay, dark brown. 9.5 10 5/5 15 (16 - 21) Silly CLAY and clayey SILT, trace gravel and sand, greater sand content with depth, yellowish brown. cuttings 20 (21 - 22) Gravelly CLAY, ~20% fine to medium gravel in clay matrix. (22 - 24) SHALE potentially, drilling more difficult. Notes: This log should not to be used separately from the report to which it is attached.

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Annular Materials

(0.0 - 2.0) Concrete (2.0 - 6.0) Bentonite Hole Plug (6.0 - 23.0) 20/40 Silica Sand Well Materials

(0 - 8.0) Casing, 2" Sch 40 FJT PVC (8.0 - 23.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: MW-31(R) **Exide Technologies** Completion Date: 5/21/2013 Drilling Method: DPT Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): 7103086.71 Tim Jennings, P.G. Northing: Field Supervisor: 2480178.9987 Logged By: Tim Jennings, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 4' Lined Tube Lithologic Description Depth **H** Sample uscs (ft) Interval Ō (0 - 0.9) CONCRETE SLAB CON 1 (0.9 - 5.4) FILL, sandy clay, red and reddish gray, moist, firm, medium plasticity. 0.9 - 23.7/4 2 3 5 (5.4 - 7.0) FILL, silty clay, dark grayish black, moist, firm, high plasticity, fragments of limestone and slag below 6.7'. 6 3.3/4 5.8 - 7.3 💢 7 (7.0 - 7.3) FILL, sand, gravel and slag, dry. (7.3 - 8.0) No recovery. 8 (8.0 - 12.0) Silly CLAY/Clayey SILT, dark gray, moist, wet below 9.5', firm to soft, high plasticity. 9 9.5 10 3.8/4 CH/MH 11 12

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.



DRILLING METHOD: HSA

NORTHING: 7,101,921 FT EASTING: 2,479,831 FT

DATE/TIME: 01/09/2014, 1545

DRILLER: SCI, Dan Spaust

TOTAL DEPTH: 5 FT BGS

RIG: CME-75

SURFACE ELEVATION: 631.37 FT AMSL

IOTAL	DEF I II.	5 F1 BGS		RIG:	CME-75		SURFACE ELEVATION: 631.37 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						0 0 0 0	0.0-0.58 FT, Concrete.
				1.	CH		0.58-1.0 FT, FILL (CH) CLAY; dark gray, reddish yellow mottling; moist, stiff.
					CL		1.0-1.5 FT, FILL (CL) SILTY CLAY, trace fine to coarse, angular gravel; dark
-	1	NA	<u>4.4</u> 4.4		СН		gray, reddish yellow mottling; wet, soft.  1.5-5.0 FT, (CH) CLAY; dark gray; dry, very stiff.
							4.0 FT, damp, stiff.
-5 -							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
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PROJECT No:	130-2086	COMPILED BY: BEF			
PROJECT:	Exide Frisco	CHECKED BY:	TDT		
LOCATION:	Wastewater Treatment Plant	REVIEWED BY:	JW		

# LOG OF MW-33/2013-FWFS-5B

DRILLING METHOD: HSA

NORTHING: 7,101,872 FT

DATE/TIME: 01/10/2014, 1530

DRILLER: SCI, Dan Spaust

EASTING: 2,480,021 FT

TOTAL DEPTH: 5 FT BGS

RIG: CME-75

SURFACE ELEVATION: 632.93 FT AMSL

TOTALL	JEF 111. 	5 F1 BGS		RIG:	CME-75		SURFACE ELEVATION: 632.93 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						0 0 0 0	0.0-1.17 FT, Concrete, one inch steel at 0.5 FT.
_						9 4 9 9	
				10	SP		1.17-1.25 FT, FILL (CL) SILTY CLAY; reddish yellow; wet, soft.
				1-2 (1600)			1.25-1.5 FT, FILL (SP) SAND; brown; wet, loose. 1.5-5.0 FT, (CH) CLAY; dark gray; damp, firm.
							2.0 FT, trace coarse gravel, stiff.
			3.8				
	1	NA	<u>3.8</u> 3.8	2-4 (1602)	CH		
				4-5 (1604)			
_				(1004)			
-5							End of borehole at 5 FT BGS
							Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Treatment Bldg	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,101,877 FT

DATE/TIME: 01/10/2014, 1030

DRILLER: SCI, Dan Spaust

EASTING: 2,480,097 FT

TOTAL DEPTH: 5 FT BGS

RIG: CME-75

SURFACE ELEVATION: 633.15 FT AMSL

DEPTH	RUN	PID	REC	CAMPLE	11000	GRAPHIC LOG	DESCRIPTION AND CONTINUE
(Feet)	No.	(PPM)	(Feet)	SAMPLE	USCS	LOG	DESCRIPTION AND COMMENTS 0.0-0.7 FT, Concrete.
					CL		
-					<u> </u>		0.7-1.0 FT, FILL (CL) SILTY CLAY; reddish yellow; wet, soft.  1.0-5.0 FT, (CH) CLAY; dark gray; damp, stiff.
							1.75 FT, moist, firm. 2.0 FT, damp, stiff.
							2.0 FT, damp, stiff.
_	1	NA	4.3 4.3	100000	СН		
<b></b> 5							4.75 FT, some silt; very moist, firm.
- <b>5</b>							End of borehole at 5 FT BGS  Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Raw Material Storage Area	REVIEWED BY:	JW



DRILLING METHOD: HSA

DRILLER: SCI, Dan Spaust

NORTHING: 7,101,736 FT

EASTING: 2,480,191 FT

TOTAL DEPTH: 5 FT BGS

DATE/TIME: 01/10/2014, 0945

RIG: CME-75

SURFACE ELEVATION: 632.82 FT AMSL

IOIALI	JEF I II.	5 F1 BGS		RIG:	CME-75		SURFACE ELEVATION: 632.82 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0-1.0 FT, Concrete.
_				-	CL		1.0-1.5 FT, FILL (CL) SILTY CLAY, some gravel; dark gray; very moist, firm.
	1	NA	<u>4.0</u> 4.0	1-3 (1000)	СН		1.5-4.25, (CH) CLAY, trace fine to coarse gravel; dark gray, trace reddish yellow mottling; damp, stiff.
					СН		4.25-5.0 FT, (CH) CLAY, trace silt; dark gray, trace reddish yellow mottling; very moist, firm.
-5 - -							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
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						Tabella Company	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Raw Material Storage Area	REVIEWED BY:	JW



DRILLING METHOD: HSA

DRILLER: SCI, Dan Spaust

NORTHING: 7,101,815 FT

EASTING: 2,480,274 FT

TOTAL DEPTH: 5 FT BGS

DATE/TIME: 01/10/2014, 0845

RIG: CME-75

SURFACE ELEVATION: 633.86 FT AMSL

IOIALI	JEP I H:	3 7 1 503		RIG:	CME-75		SURFACE ELEVATION: 633,86 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
						0 4 4 9	0.0-0.8 FT, Concrete.
-				0-2	CL		0.8-1.0 FT, FILL (CL) SILTY CLAY, some gravel; dark gray; very moist, firm. 1.0-3.25 FT, (CL) SILTY CLAY; dark gray, reddish yellow mottling; damp,
_				(0900)	CL		soft.  2.0 FT, moist, firm.
_	1	NA	2.8 4.2	***************************************			
					CL/SC		3.25-4.0 FT, (CL/SC) SANDY CLAY, trace coarse gravel; dark gray; wet, soft.
<u> </u>		777			СН		4.0-5.0 FT, (CH) CLAY, trace fine gravel; brown; damp, stiff.
<u>-</u> 5 -							End of borehole at 5 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Raw Material Storage Area	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,102,342 FT

DATE/TIME: 01/09/2014, 1015

DRILLER: SCI, Dan Spaust

EASTING: 2,479,077 FT

TOTAL DEPTH: 10 FT BGS

RIG: CME-75

SURFACE ELEVATION: 621.20 FT AMSL

DEPTH	RUN	PID	REC	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No. 1	(PPM)	(Feet) 5.0 5.0		СН		0.0-5.5 FT, (CH) CLAY, trace silt; dark brown, yellowish red mottling; damp, stiff.
_	2		<u>5.0</u> 5.0		CH/CL		5.5-8.5 FT, (CL) CLAY, some silt, trace fine gravel; dark brown, reddish yellow mottling; moist, firm.  8.0 FT, some fine to coarse gravel; brown, reddish yellow and gray mottling.  8.5-9.5 FT, SHALE; dark gray, yellowish red mottling, weathered, friable; damp, stiff.
- 10							End of borehole at 10 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
- 15 - -							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Storm Water Retention Pond	REVIEWED BY:	JW



DRILLING METHOD: HSA NORTHING: 7,102,173 FT

DATE/TIME: 01/09/2014, 0845 DRILLER: SCI, Dan Spaust EASTING: 2,479,349 FT

TOTAL DEPTH: 15 FT BGS RIG: CME-75 SURFACE ELEVATION: 623.50 FT AMSL

DEPTH	RUN	PID	REC	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No	(PPM)	(Feet) <u>5.0</u> 5.0	5	CL		0.0-4.25 FT, (CL) SILTY CLAY; dark brown; damp, stiff.
-5 - -	2	NA	<u>3.0</u> 5.0		СН		4.25-11.0 FT, (CH) CLAY, trace silt, trace fine gravel; brown, slight reddish yellow mottling; dry, very stiff.
-	3		<u>5.0</u> 5.0		CL		11.0-12.75 FT, (CL) GRAVELLY CLAY, fine to coarse, trace silt; brown, reddish yellow mottling; moist, firm.  12.75-14.75 FT, (CH) CLAY, trace fine to coarse gravel; brown, reddish yellow mottling; moist, stiff.
- 15							14.75-15.0 FT, SHALE; dark gray, yellowish red mottling; dry, very stiff.  End of borehole at 15 FT BGS  Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Storm Water Retention Pond	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/08/2014, 0945 DRILLER: S

DRILLER: SCI, Dan Spaust

NORTHING: 7,102,473 FT

EASTING: 2,479,631 FT

TOTAL DEPTH: 20 FT BGS RIG: CME-75 SURFACE ELEVATION: 637,26 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1		<u>5.0</u> 5.0		СН		O.0-4.5 FT, (CH) CLAY, trace silt, trace coarse rounded gravel, organics; brown, reddish yellow mottling; damp, stiff.  2.0 FT, some coarse rounded gravel, some gray mottling.  4.5-10.0 FT, (CH) CLAY, trace silt, trace fine to coarse gravel; dark brown,
-5	2		<u>2.5</u> 5.0		СН		4.5-10.0 FT, (CH) CLAY, trace silt, trace fine to coarse gravel; dark brown, reddish yellow mottling, friable; dry, very stiff.
- 10	3	NA	<u>5.0</u> 5.0		СН		10.0-15.0 FT, (CH) CLAY, trace fine to coarse gravel; reddish yellow, gray mottling; damp, stiff.
- 15 - - -	4		<u>3.0</u> 5.0		CL		15.0-19.5 FT, (CL) SANDY CLAY; reddish yellow, light gray mottling, very moist, very soft.  19.5-20.0 FT, SHALE; gray, yellow and reddish yellow mottling; dry, very stiff.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	ומן
LOCATION:	Slag Landfill	REVIEWED BY:	WL



DRILLING METHOD: HSA

NORTHING: 7,102,473 FT

DATE/TIME: 01/08/2014, 0945

DRILLER: SCI, Dan Spaust

EASTING: 2,479,631 FT

TOTAL DEPTH: 20 FT BGS

BGS RIG: CME-75

SURFACE ELEVATION: 637.26 FT AMSL

		2011 800		IXIO	OIVIL 10		GONTAGE ELEVATION. GONZOTTAMOE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-							End of borehole at 20 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Landfill	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/08/2014, 1115

DRILLER: SCI, Dan Spaust

NORTHING: 7,102,568 FT

EASTING: 2,479,900 FT

TOTAL DEPTH: 15 FT BGS

BGS RIG: CME-75

SURFACE ELEVATION: 633.00 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1	(110)	0.0* 5.0		сн		0.0-7.0 FT, (CH) CLAY, trace silt, trace fine gravel, organics; brown, reddish yellow mottling; damp, stiff.
-5	2	NA	<u>5.0</u> 5.0		СН		5.0 FT, some fine to coarse gravel.  7.0-10.0 FT, (CH) CLAY, trace fine to coarse gravel; reddish yellow, gray mottling; moist, stiff.
- 10	3		<u>5.0</u> 5.0		СН		10.0-14.0 FT, (CH) CLAY; gray, yellow, reddish yellow, friable, transitioning to weathered SHALE; damp, stiff to very stiff.  14.0-15.0 FT, SHALE; gray; dry, very stiff.
- 15 - - -							End of boring at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.  *Hand auger used to collect soil samples for lithology for 0-5.0 FT interval because no material was recovered in the CME-75 bearing head continuous sampler.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Landfill	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/08/2014, 1330

DRILLER: SCI, Dan Spaust

NORTHING: 7,102,693 FT

EASTING: 2,480,074 FT

TOTAL DEPTH: 17 FT BGS

RIG: CME-75

SURFACE ELEVATION: 639.14 FT AMSL

DEPTH	RUN	PID	REC			GRAPHIC	
(Feet)	No.	(PPM)	(Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS  0.0-3.0 FT, (CH) CLAY, trace fine angular gravel; dark brown; dry, stiff.
_	1		<u>5.0</u> 5.0	0.0-0.5 (1340) 0.5-2.0 (1345)	СН		
- - -5							3.0-10.0 FT, (CH) CLAY, trace silt, trace fine angular gravel; dark brown, friable; dry, very stiff.
-			5.0		СН		5.0 FT, some gravel; damp, stiff.
	2	NA	<u>5.0</u> 5.0				8.0 FT, trace sand; moist.
— 10 -				1000	SC/GC		10.0-11.5 FT, (SC/GC) gravelly CLAYEY SAND; reddish yellow; wet, loose.
	3		<u>1.8</u> 5.0		CL/GC		11.5-13.5 FT, (CL/GC) gravelly SANDY CLAY; reddish yellow; wet, firm.
- - 15					СН		13.5-16.25 FT, (CH) CLAY; reddish yellow, gray mottling; dry, stiff.
	4		2.0 2.0	_			16.25-17.0 FT, SHALE; dark gray; dry, stiff.
-							End of borehole at 17 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary	REVIEWED BY:	JW



DRILLING METHOD: HSA

DRILLER: SCI, Dan Spaust

NORTHING: 7,102,696 FT EASTING: 2,480,712 FT

DATE/TIME: 01/08/2014, 1530

TOTAL DEPTH: 15 FT BGS

RIG: CME-75

SURFACE ELEVATION: 638.71 FT AMSL DEPTH RUN PID REC GRAPHIC LOG SAMPLE USCS **DESCRIPTION AND COMMENTS** (Feet) (PPM) (Feet) No. 0.0-7.5 FT, (CH) CLAY, trace fine angular gravel, organics; dark brown; dry, 0.0**-**0.5 (1540) 0.5-2.0 (1545)1 CH 4.0 FT, friable, damp. - 5 <u>5.0</u> 5.0 2 NA 7.5-10.0 FT, (CH) CLAY, trace fine to coarse angular gravel; brown, reddish yellow and gray mottling; moist, stiff. СН - 10 10.0-11.5 FT, (SC/GC) gravelly CLAYEY SAND; reddish yellow; wet, compact. SC/GC 11.5-12.0 FT, (CL/GC) gravelly SANDY CLAY; reddish yellow; wet, soft. CL/GC 12.0-14.0 FT, (CH) CLAY; reddish yellow, gray mottling; dry, very stiff. 3 СН 14.0-15.0 FT, SHALE; dark gray, reddish yellow mottling; dry, very stiff. - 15 End of borehole at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/07/2014, 1015
TOTAL DEPTH: 20 FT BGS

DRILLER: SCI, Dan Spaust

RIG: CME-75

NORTHING: 7,102,422 FT

EASTING: 2,480,782 FT

SURFACE ELEVATION: 645.87 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		2.1		0-2 (1200)			0.0-6.0 FT, (CH) CLAY, trace gravel, trace organic; black; moist, soft.
	1	37.1	<u>5.0</u> 5.0	2-4 (1210)	СН		2.0 FT, dry, firm.
_		124					
-5		124					5.0 FT, brown.
_	2	185	<u>1.3</u> 5.0	To the state of th	CL		6.0-10.0 FT, (CL) SILTY CLAY, with fine gravel; gray; dry, stiff.
- 10		492		8-10 (1220)	<b></b>		
- - -	3	2.8	<u>1.3</u> 5.0		ML		10.0-15.0 FT, (ML) CLAYEY SILT, with fine gravel; brown; dry, firm.
- 15 -		83.1			СН		15.0-17.0 FT, (CH) CLAY; brown and gray, reddish brown mottling; moist, stiff.
_	4	238	2.5 5.0	17-20 (1230)			17.0-20.0 FT, SHALE; black; dry, stiff.

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,102,422 FT

DATE/TIME: 01/07/2014, 1015

DRILLER: SCI, Dan Spaust

EASTING: 2,480,782 FT

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

SURFACE ELEVATION: 645.87 FT AMSL

		7		10	CIVIL-70	1	GONTAGE ELEVATION, 040,0711 AMOL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Former Fire Fighter Training	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/09/2014, 1230

DRILLER: SCI, Dan Spaust

NORTHING: 7,101,660 FT

EASTING: 2,480,550 FT

TOTAL DEPTH: 15 FT BGS

RIG: CME-75

SURFACE ELEVATION: 634.33 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	( T IVI)	4.8 5.0	0.0-0.5 (1245) 0.5-2.0 (1248) 2.0-4.0 (1250)	СН		0.0-5.0 FT, (CH) CLAY, trace fine gravel; dark brown; damp, stiff.
-5	2	NA	<u>1.8</u> 5.0		CL		5.0-9.5 FT, (CL) SANDY CLAY, trace fine gravel; brown; very moist, soft.  9.5-11.0 FT, (CH) CLAY, trace fine gravel; dark brown; damp, stiff.
- 10	3		<u>5.0</u> 5.0		CH CL/GC		11.0-13.5 FT, (CL/GC) gravelly CLAY, trace silt; brown, gray and reddish yellow mottling; damp, stiff.  13.5-14.5 FT, SHALE; dark gray, yellowish red mottling, weathered, friable; dry, stiff.
- 15 - -							14.5-15.0 FT, SHALE; dark gray; dry, very stiff.  End of borehole at 15 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.

PROJECT NO:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	IDI
LOCATION:	Truck Wash Station	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 01/07/2014, 1415

DRILLER: SCI, Dan Spaust

NORTHING: 7,103,915 FT EASTING: 2,480,303 FT

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

SURFACE ELEVATION: 657.90 FT AMSL

					OINE 70		
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1		<u>4.0</u> 5.0	0.0-0.5 (1430) 1-2 (1440)			O.0-12.5 FT, (CH) CLAY, some coarse angular gravel, organics; brown; dry, stiff. O.5 FT, some fine gravel.  2.0 FT, damp.
-5 -				4-5 - (1450)	СН		
-	2		<u>4.0</u> 5.0				8.0 FT, reddish yellow mottling.
- 10 -	3	NA	<u>5.0</u> 5.0				10.0 FT, trace coarse gravel.
- - - 15	3	to order	5.0		CL/GC		12.5-15.0 FT, (CL/GC) gravelly SILTY CLAY, coarse; reddish yellow; very moist, soft.  14.0 FT, firm.  15.0-19.9 FT, (SC) SILTY CLAY; reddish yellow, friable; dry, firm.
_	4		<u>3.0</u> 5.0	15-17 (1510) 17-18 (1520)	CL		13.0-13.8 FT, (30) SILTT CLAT, TeauIST Yellow, ITIADIE, CITY, IIITIT.
-	v v v			18-20 (1530)			19.9-20.0 FT, SHALE; gray.

PROJECT No.	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,103,915 FT

DATE/TIME: 01/07/2014, 1415

DRILLER: SCI, Dan Spaust

EASTING: 2,480,303 FT

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

SURFACE ELEVATION: 657.90 FT AMSL

DEPTH RUN   PID   REC   (Feat)   Windows   Pid   Rec   (Feat)				2011 200			OIVIE 76	T	OUTT NOT THE CONTROL OF THE CONTROL
End of borehole at 20 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.	DEF (Fe	PTH eet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-30 	-								End of borehole at 20 FT BGS Borehole completed with above ground monitoring well and protective steel casing. See well construction log for well installation and completion information.
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PROJECT NO:	130-2000	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,101,919 FT

DATE/TIME: 01/09/2014, 1415

DRILLER: SCI, Dan Spaust

EASTING: 2,479,834 FT

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

SURFACE ELEVATION: 631.38 FT AMSL

		7		RIG:	CIVIE-75	т .	SURFACE ELEVATION: 631.38 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
						2 4 4 6	0.0-0.5 FT, Concrete.
		1			CH		0.5-1.0 FT, FILL (CH) CLAY, some coarse gravel; dark gray, reddish yellow
-					CL		mottling; moist, stiff.  1.0-1.5 FT, FILL (CL) SILTY CLAY, trace fine to coarse, angular gravel; dark
					01		gray, reddish yellow mottling; wet, firm.
-							1.5-7.5 FT, (CH) CLAY; dark gray; dry, very stiff.
			4.5				
	1		<u>4.5</u> 4.5				
							3.5 FT, damp, stiff.
					CII		
_					СН		
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_							
	2		<u>5.0</u> 5.0				7.5.5.5.7. (0) (0.0)
	_		5.0		CL/GC		7.5-8.5 FT, (CL/GC) gravelly CLAY, fine to coarse, some silt; reddish yellow; moist, soft.
					0200		
							8.5-10.0 FT, (CH) CLAY, trace gravel; reddish yellow; dry, stiff.
					СН		
-10		NA NA		1			10.0-15.0 FT, (CL/GC) gravelly CLAY, fine to coarse, trace silt; reddish
							yellow, gray mottling; dry, stiff.
-							
ļ							
	3		<u>5.0</u> 5.0		CL/GC		
	J	ļ	5.0		0200		
†							
<del>-</del> 15		}					15.0-17.5 FT, SHALE and SAND, fine; reddish yellow and gray, weathered;
							dry, stiff.
-						E	
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	,		1.8				
	4		<u>1.8</u> 5.0				17.5-20.0 FT, SHALE; dark gray; dry, very stiff.
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Wastewater Treatment Plant	REVIEWED BY:	JW



DRILLING METHOD: HSA

NORTHING: 7,101,919 FT

DATE/TIME: 01/09/2014, 1415

DRILLER: SCI, Dan Spaust

EASTING: 2,479,834 FT

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

SURFACE ELEVATION: 631.38 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_	140.	(1.1.101)	(i cci)				End of borehole at 20 FT BGS Borehole completed with flush-mount monitoring well. See well construction log for well installation and completion information.
- 25							
-							
_							
- 30							
				1			
_							
- 35							
-							

PROJECT No:	130-2080	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Wastewater Treatment Plant	REVIEWED BY:	JW



DRILLING METHOD: HSA

DATE/TIME: 05/02/2017, 0934

DRILLER: West Drilling, Gus Alejandro

NORTHING: 7,102,777 FT

EASTING: 2,480,302 FT

TOTAL DEPTH: 15 FT BGS

RIG: CME-75

SURFACE ELEVATION: 635.65 FT AMSL

DEDTU	DUN	חים	DEC	<del>-</del>		T	<del></del>										
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS										
-	1		<u>5.0</u> 5.0		CL		0.0-4.0 FT, (CL) SILTY CLAY; dark brown; dry, firm.										
					CL		4.0-5.0 FT, (CL) CLAY, some silt; dark brown; dry, stiff.										
- 5 -		<u>5.0</u> 5.0			CL		5.0-7.0 FT, (CL) CLAY, some gravel; tan, orange mottling; dry, stiff.										
_	2		<u>5.0</u> 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0	<u>5.0</u> 5.0						CL		7.0-9.0 FT, (CL) gravelly CLAY, some silt; tan, orange mottling; dry, firm.
- 10				<u>5.0</u> 5.0	CL/GC		9.0-10.0 FT, (CL/GC) GRAVEL & CLAY; tan, orange mottling; dry, firm.  10.0-11.0 FT, saturated, soft.										
_					CL		11.0-12.0 FT, grey mottling 11.0-12.0 FT, (CL) CLAY, trace gravel; tan, orange & gray mottling; moist,										
_	3		<u>5.0</u> 5.0				stiff. 12.0-15.0 FT, (CH) CLAY; tan/dark gray, orange mottling; dry, firm.										
_					СН		13.5-15.0 FT, Soil becomes dark gray with ferrous mottling; hard										
- 15 - -							End of borehole at 15 FT BGS Borehole completed withstick-up monitoring well.										
_																	

PROJECT No:	130-2086	COMPILED BY:	AM
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	Class 2 Landfill	REVIEWED BY:	AMF

	Exic	de Te	chnol	ogies		Log of Boring	j: 2012-NDA	-1			
				······································	Completion Date:	1/10/2012	Drilling Method:	Geoprobe			
			g Cente	Г	Drilling Company	StrataCore	Borehole Diameter (in.):	2.25			
	I	Frisco, 7	ΓX		Driller:	Mario Robles	Total Depth (ft):	В			
					Driller's License:	52694	Northing:	7102385.51			
	PRW P	roject N	lo. 1755		Logged By:	Christopher Moore, P.G.	Easting:	2480118.633			
	1 044 1	roject i	10. 1700		Sampling Method	2"x 4' Barrel	Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (fl/fl)	Old (mdd)	Sample Interval	uscs	Lithologic Description						
1	2.7/4.0	0	0-2		(0 - 8.0) CLAY, CH, dark gray, moist, soft to firm, medium plasticity, trace sand size carbonate nodules, no odor. 2.0-2.5: black, gravel size slag fragments. 4.0-5.0 some sand. 4.5: wet, sample saturated, borehole filling with water.						
3	2.114.0	0.1	2-4								
5		0									
6 7 8	3.5/4.0	0.1	No. personal anni di distributi di di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distributi di distri								

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

NOtes:

Boring location hand probed to 4.5 feet to check for utilities.

Borahole plugged with bentonite chips upon completion.

Saturated soils encountered at 4.5 feet. Boring terminated and water sample collected from base of boring.

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-NDA-1 **Exide Technologies** DPT Drilling Method: Completion Date: 3/5/2013 Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7102386.1757 Field Supervisor: Northing: 2480118.7926 Roberta Russell Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery Depth Sample Lithologic uscs Interval Description (ft) (0 - 1.7) FiLL, silty clay, dark brown, abundant orange Fe-ox staining, 1" stag fragment at 1.6", moist, soft to firm, low plasticity. 0 1 (1.7 - 6.0) Silly CLAY, dark reddish brown, moist, wet at 4.1', soft to firm, low plasticity. 2 4.6/5 3 4 - 5 5 1/1 5 - 6 6

# **PBW**

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Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

# LOG OF 2013-NDA-1A

DRILLING METHOD: Direct Push

NORTHING: 7,102,386 FT

DATE/TIME: 01/09/2014, 1000

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,106 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

TOTAL	DEPTH:	5 FT BGS		RIG:	Geoprob	е	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	<u>5.0</u> 5.0		CL		0-3.0 FT, (CL) SILTY CLAY, trace fine gravel; brown and dark brown; dry, stiff.
-5				2-4 (1015)	CL		3.0-5.0 FT, (CL) CLAY, trace gravel; dark brown, dry, stiff.
3							End of borehole at 5 FT BGS
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Mar.							
				111111111111111111111111111111111111111			
10							
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		4411				AAAAA SAAAA	
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		n et tradicione					
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PROJECT NO.	130-2000	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Disposal Area	REVIEWED BY:	JW

#### Log of Boring: 2012-NDA-2 **Exide Technologies** Drilling Method: Geoprobe Completion Date: 1/10/2012 Frisco Recycling Center Frisco, TX Borehole Diameter (in.): 2.25 StrataCore Drilling Company: Driller: Mario Robles Total Depth (ft): 18 7102389.57 Northing: 52694 Driller's License: Christopher Moore, P.G. Easting: 2480411.84 Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): Sampling Method: 2"x 4' Barrel Recovery (ff/ft) Lithologic OP (mdd) Depth Sample uscs Description (ft) Interva (0 - 4.0) CLAY, CH, dark gray, moist, soft, medium plasticity, some sand size carbonate 0 nodules, no odor. 3.0-4.0; glass fragments, duct tape, black gravel size slag fragments with metallic odor. 0-2 n 2.6/4.0 2 3 0.1 2-4 (4.0 - 11.0) CLAY, CH, dark gray, moist, firm, medium to high plasticity, some sand size carbonate nodules, no staining or foreign material observed. 5 0.1 4.0/4.0 6 7 0.1 8 9 0.1 10 4.0/4.0 (11.0 - 13.3) CLAY, CH, gray, moist, firm to hard, high plasticity, laminated, yellowish brown/orange staining in laminae, no foreign material observed, no odor. 0.1 11 12 0.1 13 (13.3 - 18.0) CLAY/SHALE, dark gray, moist firm to hard, high plasticity, laminated, fractured, yellowish brown/orange staining in fractures, no odor. 4.0/4.0 14 15 16 17 2.0/2.0 16-18 18

# **PBW**

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### Notes

Boring location hand probed to 4 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

Refusel at 18 0 feet, No water observed in borehole after 1 hour following completion,

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-NDA-3 **Exide Technologies** Completion Date: 1/10/2012 Drilling Method: Geoprobe Frisco Recycling Center Drilling Company: StrataCore Borehole Diameter (in.): 2.25 Frisco, TX Driller: Mario Robles Total Depth (ft): 7102442.92 Driller's License: 52694 Northing: Logged By: Christopher Moore, P.G. 2480662.06 Easting: PBW Project No. 1755 Sampling Method: 2"x 4' Вапеl Ground Elev. (ft AMSL): Recovery (ff/ff) Lithologic Depth OP (mdg) Sample uscs (ft) Interval Description (0 - 4.5) CLAY, CH, dark gray and very dark gray, moist, firm, medium plasticity, possible fill material, some angular gravel, 0.5-0.7 angular black plastic fragments, no odor. ō 0 0-2 1 3.0/4.0 2 3 0 (4.5 - 14.8) CLAY, CH, brownish yellow, moist, firm, moist to hard, medium to high plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor, 10.0-14.8: mottled light gray, increased carbonate nodules. 12.2-12.4: sand lens, 5 0 4.0/4.0 6 7 0.1 8 0.1 9 4.0/4.0 10 0.1 11 12 13 0.1 14 3,6/4.0 (14.8 - 19.0) GLAY, CH, dark gray, moist, firm to hard, high plasticity, laminated, fractured, 15 yellowish brown/orange staining in fractures, no staining or foreign material observed, no 0.1 16 17 3.0/3.0 18 17-19 0.1 19 Boring location hand probed to 4.5 feet to check for utilities Borshole plugged with bentonite chips upon completion.

Refusal at 19.0 feet. No water obsserved in borehole after 1 hour following completion.

This Log of Boring should not be used separately from the report to which it is attached.

Pastor, Behling & Wheeler, LLC

2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

	Exi	de Te	chnol	ogies		Log of Boring: 2012-NDA-4				
			-	***************************************	Completi	on Date:	2/22/2012	Drilling Method:	Hand Sampler	
	Frisco Recycling Center Drilli						NA	Borehole Diameter (in.)	2.25	
		Frisco,	IX		Driller.		NA	Total Depth (ft):	4	
-		······		***************************************	Driller's L	icense:	NA	Northing:	7102395.75	
PBW Project No. 1755						Зу:	Christopher Moore, P.G.	Easting:	2480119.01	
		,			Sampling Method: 2"x 2' Barrel Ground Elev. (ft AMSL): -				: -	
Depth (ft)	Recovery (fl/ft)	PID (mpm)	Sample Interval		Lithologic Description					
1	•••	0					dark gray, moist, soft to firm no odor. Borehole filling with			
3 -	1.2/2.0	0	2-4							

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Borehole plugged with bemonite chips upon completion.

This Log of Boring should not be used seperately from the report to which it is attached.

	Exide Technologies						Log of Boring: 2012-NDA-5				
		***************************************			Completi	on Date:	2/22/2012	Drilling Method;	Hand Sampler		
	Frisco Recycling Center Drilling						NA	Borehole Diameter (in.): 2.25			
	Frisco, TX						NA	Total Depth (ft):	1		
	Driller's L						NA	Northing:	7102459.95		
	PRW F	Project N	lo. 1755		Logged F	Зу:	Christopher Moore, P.G.	Easting:	2480666.14		
		·			Sampling	Method:	2"x 2' Barrel	Ground Elev. (ft AMSL)	-		
Depth (ft)	Recovery (ft/ft)	OID (mdd)	Sample Interval			Lithologic Description					
0	0.5/1.0	0	NA	GH	(0 - 1.0) CLAY, CH, dark grayish brown, moist, soft to firm, medium plasticity. Slag fragment at approximately 0.5 feet blocked sample barrel.						

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Notes: Borehole plugged with bentonite chips upon completion. This Log of Boring should not be used seperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-NDA-6				
		······································	_		Completion Date	: 2/22/2012	Drilling Method:	Hand Sampler		
			g Cente	Γ	Drilling Compan	r. NA	Borehole Diameter (in.):	2.25		
		Frisco, 7	IX		Driller:	NA	Total Depth (ft):	2		
<b> </b>		<del></del>			Driller's License:	NA	Northing:	7102503.41		
	PBW F	Project N	lo. 1755		Logged By:	Christopher Moore, P.G.	Easting:	2480665.79		
		,			Sampling Method: 2"x 2' Barrel Ground Elev. (ft AMSL):					
Depth (ft)	Recovery (fl/ft)	Old (mdd)	Sample Interval	USCS	Lithologic Description					
1	1.2/2.0	0	0-2	SH.	(0 - 2.0) CLAY, CH, dark grayish brown, moist, soft to firm, medium plasticity, no staining or foreign material observed, no odor.					

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borshole plugged with bentanite chips upon completion.
This Log of Boring should not be used separately from the report to which it is attached.

# Golder ssociates

# LOG OF 2014-NDA-7

DRILLING METHOD: Direct Push DRILLER: SCI, Margarito Estrada

NORTHING: 7,102,403 FT

EASTING: 2,480,551 FT

DATE/TIME: 04/01/2014, 0930 TOTAL DEPTH: 15 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 646 FT AMSL

			1				Т .	
DEP (Fee	TH et)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
			9.0		0.0-0.5			0.0-4.0 FT, (CH) CLAY; dark brown and black; dry, very stiff.
L					(1001)			
			10.3		0.5-2.0			
		1		<u>4.0</u> 4.0	(1002)	СН		2.0 FT, trace gravel; brown, trace white calcareous nodules.
		•		4.0		CIT		2.57 1, trade graver, brown, trade write calculations floudies.
			18.8					
			10.0		2.0-4.0 (1003)			
-					]`			
								4.0-7.0 FT, (CL) SILTY CLAY, trace sand; gray, reddish yellow mottling; dry, hard.
-5			10.3					,
						CL		
-		2		<u>4.0</u> 4.0				
				4.0				
-			7.1					7.0-9.0 FT, (ML) CLAYEY SILT, some sand and gravel; gray and brown,
								friable, platy; damp, hard.
-	-					ML		
								9.0 FT, coarse gravel for 0.25 FT.
-			16.7					9.0-10.5 FT, (CL) SILTY CLAY, some sand and gravel; gray and brown.
				4.0		CL		friable, platy; damp, hard.
- 10		3		4.0 4.0		OL.		
							10.5-11.5 FT, (CH) CLAY; red and gray, yellowish mottling; damp, stiff-hard.	
<b> </b>			11.2			СН		
								11.5-14.5 FT, (CH) CLAY and SHALE; gray, reddish yellow mottling; damp,
								stiff-hard.
			47.0	3.0		СН		
		4	17.3	<u>3.0</u> 3.0				
- 15	L							14.5-15.0 FT, SHALE; dark gray; dry, very hard.
'3								End of borehole at 15 FT BGS (Refusal)
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L								
L						İ		
_								

PROJECT No:	130-2086	COMPILED BY:	BEF	
PROJECT:	Exide Frisco	CHECKED BY:	JDJ	
LOCATION:	North Disposal Area	REVIEWED BY:	JW	

# **LOG OF 2014-NDA-8**

DRILLING METHOD: Direct Push

NORTHING: 7,102,410 FT

DATE/TIME: 04/01/2014, 1430

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,359 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPT	H RUN	DID	BEC	Ţ			
(Feet	No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5 (1446) 0.5-2.0	СН		0.0-1.75 FT, (CH) CLAY; dark brown; dry, soft-firm.
	1	N/A	<u>4.0</u> 4.0	(1447)	GC		1.75-2.25 FT, (GC) CLAYEY GRAVEL, coarse; gray and brown; dry,
	'	N/A	4.0		GC		compact.  2.25-4.0 FT, (CH) CLAY; brown and gray, reddish mottling; moist, stiff.
				2.0 <b>-</b> 4.0 (1448)	СН		3.75 FT, some gravel.
							End of borehole at 4 FT BGS
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				7.0			
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<b>-</b> 15		***************************************					
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-				Temporal delication .		1000	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Disposal Area	REVIEWED BY:	JW

# LOG OF 2014-NDA-9

DRILLING METHOD: Direct Push

NORTHING: 7,102,398 FT

DATE/TIME: 04/01/2014, 1400

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,108 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 639 FT AMSL

IOTALI	DEPTH:	4 FT BGS		RIG:_	Geoprob	e	SURFACE ELEVATION: 639 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
-	1	N/A	3.0 4.0	0.0-0.5 (1415) 0.5-2.0 (1416) 2.0-4.0 (1417)	СН		0.0-4.0 FT, (CH) CLAY; dark brown and black; dry, soft-firm.  2.5 FT, trace gravel.
-							End of borehole at 4 FT BGS
-5							
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-10				**************************************			
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Disposal Area	REVIEWED BY:	JW

# LOG OF 2013-NT-01

DRILLING METHOD: Direct Push

NORTHING: 7,102,698 FT

DATE/TIME: 01/10/2014, 1600

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,314 FT

TOTAL DEPTH: 2 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LÓG	
	1	NA	2.0 2.0	0.0-0.5 (1558) 0.5-2.0 (1559)	СН		0-2.0 FT, (CH) CLAY; dark brown; moist, soft.
- 5							End of borehole at 2 FT BGS
- 10 							
- - 15 -							
-							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary	REVIEWED BY:	JW

# LOG OF 2013-NT-02

DRILLING METHOD: Direct Push

NORTHING: 7,102,697 FT

DATE/TIME: 01/10/2014, 1615

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,580 FT

TOTAL DEPTH: 2 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

		211 000			Geoplob	<u> </u>	SON ACE LEEVATION. IV/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
			,	0.0-0.5	ML		0-0.5 FT, (ML) CLAYEY SILT; dark brown; damp, soft.
	1	NA	<u>2.0</u> 2.0	0.0-0.5 (1615) • 0.5-2.0 (1616)	СН		0.5-2.0 FT, (CH) CLAY; dark brown and black; dry, stiff-firm.
						////	End of borehole at 2 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary	REVIEWED BY:	JW



## LOG OF 2014-NT-3

DRILLING METHOD: Direct Push

NORTHING: 7,102,635 FT

DATE/TIME: 03/31/2014, 1045

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,788 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 636 FT AMSL

DEPTH	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(Feet)	No.	(PPM)	3.0 5.0	0.0-0.5 (1048) 0.5-2.0 (1049) 2.0-4.0 (1050)	CL	LOG	0.0-4.0 FT, (CL) CLAY, some silt, trace fine gravel; dark brown; dry, firm-stiff.
<b>-5</b>							4.0-5.0 FT, Not Logged.  End of borehole at 5 FT BGS
- 10 -						Tayoba a sa sa sa sa sa sa sa sa sa sa sa sa	
_ _ _ 15						A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A CATALON AND A	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	· · · · · · · · · · · · · · · · · · ·	REVIEWED BY:	JW



# LOG OF 2014-NT-4

DRILLING METHOD: Direct Push

NORTHING: 7,102,580 FT

DATE/TIME: 03/31/2014, 1100

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,519 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 639 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 661)	140.	(1 1-101)	(i eei)	0.0-0.5 (1104)	CL		0.0-1.0 FT, (CL) CLAY, some silt; dark brown; dry, stiff-hard.
-				0.5-2.0 (1105)			1.0-4.0 FT, (CL) SILTY CLAY, some fine gravel; brown, reddish yellow mottling; dry, stiff-hard.
	1	N/A	<u>4.0</u> 5.0	2040	CL		3.5 FT, trace calcareous nodules.
_				2.0-4.0 (1106)			4.0-5.0 FT, Not Logged.
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-5							End of borehole at 5 FT BGS
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<b>-</b> 10							
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	North Tributary	REVIEWED BY:	JW

#### Log of Boring: PMW-19R **Exide Technologies** Completion Date: 2/26/2013 Drilling Method: **HSA** Frisco Recycling Center **Drilling Company:** Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Driller: Dan Spaust Total Depth (ft): Driller's License: 3038M 7103664.081 Northing: Roberta Russell Easting: 2480920.3742 Logged By: PBW Project No. 1755 Tim Jennings, P.G. Ground Elev. (ft AMSL): 678.45 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): Depth Well Lithologic Recovery USCS Sample (ft) Materials (ft/ft) Description (0 - 3.0) CLAY with trace gravel, dark reddish brown, moist, soft to firm, low to medium 0-0.5 plasticity, abundant calcareous nodules. 0,5-2 3.6/5.0 2-4 (3.0 - 13.0) Clayey SILT/Silty CLAY, dark reddish brown, yellowish brown from 7-10', slightly moist, very hard, low plasticity, friable from 5-6.5'. 4-5 5 3,1/5,0 10 3.4/5.0 (13.0 - 14.0) Clayey SAND/Sandy CLAY, light yellowish brown with orange staining (fron oxide), moist, soft, low plasticity. (14.0 - 19.0) SHALE, dark gray with orange staining (iron oxide along fractures and bedding planes), dry to slightly moist, soft to firm, high plasticity, weathered. 15 4.5/5.0 (19.0 - 20.0) SHALE, dark gray, dry, very hard. 20

# **PBW**

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This log should not to be used separately from the report to which it is attached.

### Annular Materials

Annular Materials (0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hole Plug (2.5 -19.0) 20/40 Silica Sand (19.0 - 20.0) Sloughed Material

### Well Materials

(+3.34 - 4.0) Casing, 2" Sch 40 FJT PVC (4.0 - 19.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: PMW-20R **Exide Technologies** 2/26/2013 Completion Date: Drilling Method: HSA Frisco Recycling Center Borehole Diameter (in.): 7.75 **Drilling Company:** Strata Core Services, LLC Frisco, TX Driller: Chris Combs Total Depth (ft): 25 56033 Northing: 7103357.9244 Driller's License: Logged By: Roberta Russell Easting: 2480030.2079 PBW Project No. 1755 Ground Elev. (ft AMSL): 645.2 Field Supervisor: Tim Jennings, P.G. Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL); 648.09 Depth Well Lithologic Recover **USCS** Sample (ft) Materials (ft/ft) Description 0 0-0.5 (0 - 2.6) CLAY, dark reddish brown, moist, soft, high plasticity. 0.5-2 'n 5.0/5.0 (2.6 - 7.5) Clayey SILT, dark reddish brown, dry to moist, very hard, low plasticity, 2-4 trace to moderate calcareous nodules. 4-5 5 2,7/5,0 (7.5 - 11.0) Sandy CLAY/Clayey SAND, moist, soft to firm, low plasticity, more clay with depth, abundant calcareous nodules. SCIC 10 (11.0 - 19.5) CLAY, reddish yellow, with trace to moderate gravel, moist, firm, low to medium plasticity, very fine to medium gravel (5-20%) in clay matrix. 5.0/5.0 15 5,0/5.0 (19.5 - 20.0) GRAVEL with clay, reddish yellow, wet, very soft, ~20-30% clay matrix. (20.0 - 21.8) CLAY with gravel; reddish yellow, wet, soft to firm, low to medium plasticity clay, <5% carbonate gravel in clay. 20 (21.8 - 23.0) GRAVEL with clay; reddish yellow, wet, soft, 30-40% low to medium 5 0/5 0 GC plasticity clay matrix in fine to medium gravel. (23.0 - 23.5) CLAY with gravel; reddish yellow, very moist, hard, low to medium plasticity clay, 30-40% fine to medium gravel. (23.5 - 25.0) SHALE, dark gray, dry, very hard, low to medium plasticity, fissile, slightly SH weathered. 25 Notes This log should not to be used separately from the report to which it is attached. Pastor, Behling & Wheeler, LLC (0.0 - 2.0) Concrele (2.0 - 7.0) Bentonite Grout (7.0 - 9.0) Bentonite Hole Plug (9.0 - 25.0) 20/40 Silica Sand (+2.89 - 10.0) Casing, 2" Sch 40 FJT PVC (10.0 - 25.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot 2201 Double Creek Dr., Suite 4004

Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

	Exi	de Te	chnol	logies		Log of Boring: 2012-RMSA-1				
					Comple	etion Date:	1/6/2012	Drilling Method:	Geoprobe	
		Recyclin		PΓ	Drilling	Company:	StrataCore	Borehole Diameter (in.):	2.25	
		Frisco,	IX		Driller:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Mario Robles	Total Depth (ft):	2.5	
		<del>g, ()</del>			Driller's	License:	52694	Northing:	7101962.48	
	PBW F	roject N	lo. 175 <b>5</b>		Logged	i By:	Christopher Moore, P.G.	Easting:	2480181.93	
	•				Sampling Method:		2"x 4' Barrel	Ground Elev. (ft AMSL):	-	
Depth (ft)	Recovery (ft/ft)	(mdd)	Soil pH	Sample Interval	USCS	Lithologic Description				
0					CON	(0 - 1.0) CONCRETE, cored.				
2	1.0/1.0	0	7.10	1.5-2.5	g₽. ∜	(1.0 - 2.5) GRAVEL, base material, angular limestone gravel, no staining or foreign material observed, no odor.				

PBW

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Round Rock, TX 78664
Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Boring location hand probed to 2.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
Refusal at 2.5

	Exic	de Te	chnol	ogies		L	Log of Boring: 2012-RMSA-2			
	<del></del>				Comple	tion Date:	1/6/2012	Drilling Method:	Geoprobe	
	Frisco Recycling Center Drilling (						StrataCore	Borehole Diameter (in.):	2.25	
		Frisco, 7	X		Driller:	(enternamental married in the detectors	Mario Robles	Total Depth (ft):	2.5	
	Driller's I						52694	Northing:	7101817.28	
	DDIM E	roject N	o 1755		Logged	Ву:	Christopher Moore, P.G.	Easting:	2480247.42	
	LDAAI	roject it			Samplin	ng Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):		
Depth (ft)	Recovery (ft/ft)	Old (mdd)	Soil pH	Sample Interval	uscs	USCS Lithologic Description				
0					CON	(0 - 0.5) C	ONCRETE, drilled out.			
1 -					(0.5 - 1.4) CLAY, CL/CH, dark gray, moist, soft to very soft, medium plasticity, n staining or foreign material observed, no odor.					
2	2.0/2.0	0.4	10.76	0.5-2.5		(1.4 - 2.5) or foreign r	ret, very soft, medium plas	licity, no staining		

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NOTES:

Boring location hand probed to 4.0 feet to check for utilities.

Borehole plugged with bentonite chips upon complation and concrete patched.

Water entering the borehole from base of concrete upon removal of sampler. Water sample collected from base of boring.

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2013-RMSA-2 **Exide Technologies** DPT Drilling Method: 3/6/2013 Completion Date: Frisco Recycling Center Frisco, TX Borehole Diameter (in.) 2 Margarito Estrada Driller: Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7101817.2841 Field Supervisor. Northing: 2480247.4183 Easting: PBW Project No. 1755 Logged By: Roberta Russell Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Recovery (ft/ft) Sample Interval Depth Lithologic USCS Description (ft) 0 (0 - 0.6) CONCRETE SLAB CON (0.6 - 5.0) Silty CLAY/clayey SILT, dark brown, very moist, soft to firm, low plasticity. 1 2 4.1/5 CLIMIL 3 2.5 - 4

# **PBW**

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Borehole plugged with bentonite chips upon completion.

	Exic	de Te	chnol	ogies			og of Boring	g: 2012-RMS	A-3
					Compl	etion Date:	1/6/2012	Drilling Method:	Geoprobe
		Recyclin		r	Drilling	Company:	StrataCore	Borehole Diameter (in.):	2.25
		Frisco, 1	X		Driller:		Mario Robles	Total Depth (ft):	3
						s License:	52694	Northing:	7101783.35
	PBW F	roject N	lo. 1755		Logge	d By:	Christopher Moore, P.G.	Easting:	2480191.27
					Sampl	ing Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	
Depth (ft)	Recovery (fVft)	P(D (mdd)	Soil pH	Sample Interval	USCS	USCS Lithologic Description			
0					CON	(0 - 1.0) CC	ONORETE, drilled out.		
2	2.0/2.0	0.2	6.83	1-3	(1.0 - 3.0) CLAY, CL/CH, mottled very dark gray and black, moist, firm, medium plasticity, no staining or foreign material observed, no odor. 2.4-2.6: some sand.				

# **PBW**

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Notes:
Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion and concrete patched.
This Leg of Boring should not be used separately from the report to which it is attached.

***************************************	Exic	de Te	chnol	ogies			Log of Boring	g: 2012-RMS	A-4	
					Compl	etion Date:	1/6/2012	Drilling Method:	Geoprobe	
	Frisco Recycling Center Drilling (						StrataCore	Borehole Diameter (in.):	2.25	
	Frisco, TX Driller:						Mario Robles	Total Depth (ft):	3.5	
<b></b>	Driller's						52694	Northing:	7101861.10	
	PBW Project No. 1755 Logged				Logge	d By:	Christopher Moore, P.G.	Easting:	2480122.65	
	1 511 10 001 110 1 1 1 1				Sampl	ing Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	-	
Depth (ft)	Recovery (fl/ft)	Old (mdd)	Soil pH	Sample Interval	USCS	USCS Lithologic Description				
1					CON	(0 - 1.5) CONCRETE and asphalt, drilled out.				
3	2.0/2.0	0.5	6.95	1.5-3.5	CL/CH	(1.5 - 1.8) SILTY CLAY, CL, with sand and gravel, fill, grayish brown, moist to wet, soft to firm, low plasticity, no staining observed, no odor.  (1.8 - 3.5) CLAY, CL/CH, very dark gray, moist, soft, medium plasticity, trace woody organic fragments (native), no staining or foreign material observed, no odor.				

# **PBW**

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Notes: Boring location hand probed to 4.0 feet to check for utilities.

Borehole plugged with bentonite chips upon completion and concrete patched.

Water entering the borehole from base of concrete upon removal of sampler. Water sample collected from base of boring. This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2013-RMSA-5 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101856.8311 Northing: Field Supervisor: Logged By: Roberta Russell Easting: 2480261.4445 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ff) Lithologic Depth Sample uscs (ft) Interval Description O (0 - 0.5) CONCRETE SLAB CON (0.5 - 5.0) Silty CLAY, wet from 0.5-2.5 (possibly from concrete corer), moist, soft to firm, low plasticity. 0 - 2 1 2 3/5 3 2 - 4 4 5

# **PBW**

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Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-RMSA-6 **Exide Technologies** 3/6/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Field Supervisor: Northing: 7101795.7748 Roberta Russell 2480248.438 Easting: PBW Project No. 1755 Logged By: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Old (mdd) Sample Lithologic USCS Description Interval (ft) (0 - 0.5) CONCRETE SLAB 0 CON (0.5 - 2.0) Clayey SILT, dark brown, moist, soft to firm, low plasticity. 1 0 - 2.5 ·ML 2 (2.0 - 3.3) Gravelly CLAY, dark brown-black, wet, very soft, low plasticity. 4.5/5 3 35 2.5 - 4 (3.3 - 5.0) Silty CLAY, dark brown-black, moist, firm, low plasticity. 5

# **PBW**

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Borehole plugged with bentonite chips upon completion,

#### Log of Boring: 2013-RMSA-7 **Exide Technologies** Completion Date: 3/6/2013 DPT Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101813.4245 Field Supervisor: Northing: Logged By: Roberta Russell 2480271.7807 Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Depth Lithologic Sample USCS Interval (ft) Description 0 (0 - 0.7) CONCRETE SLAB CON (0.7 - 2.5) FILL, clayey gravel/gravelly clay, ~20% gravel, dark brown to light brown, wet (possibly from concrete corer). 1 0 - 2 FILL 2 4.3/5 (2.5 - 5.0) Silty CLAY/clayey SILT, dark brown with black staining, moist, firm, low plasticity. 3 2 - 4 CLIMIL 4 4 - 5 5

# $\mathbf{PBW}$

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Borehole plugged with bentonite chips upon completion.

#### **Exide Technologies** Log of Boring: 2013-RMSB-1 Completion Date: 5/8/2013 Drilling Method: DPT Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Margarito Estrada Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101909.9542 Field Supervisor: Northing: PBW Project No. 1755 Logged By: Roberta Russell Easting: 2480142.5204 Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Lithologic Description Depth Old (mdd) Sample uscs Interval (ft) Ō (0 - 1.5) CONCRETE SLAB CON 1 (1.5 - 9.8) Silty CLAY/CLAY, dark brown, moist, wet at 6.5', soft to firm, low to medium 1.2 1.5 - 2 2 4/5 3 10.1 2 - 5 4 5 1.2 5 - 5.5 6 7 3/5 8 9 (9.8 - 11.5) Sandy CLAY, grayish brown, wet, soft, low plasticity. 10 11 (11.5 - 15.0) Silty CLAY, dark grayish brown, wet, soft, low to medium plasticity. 12 3.5/5 13 14 15

# **PBW**

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Borehole plugged with bentonite chips and concrete repaired upon completion. Open borehole evaluated with oll/water interface probe. No product indicated in borehole. This boring log should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-RMSB-2 **Exide Technologies** 5/8/2013 DPT Completion Date: Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101911.479 Field Supervisor: Northing: Roberta Russell 2480173.4829 Logged By: Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) PID (mdd) Depth Sample Lithologic USCS (ft) Interval Description (0 - 2.5) CONCRETE SLAB Ō 1 CON 2 4/5 (2.5 - 2.9) FILL, gravel (fine-medium) with sand, tan, moist, unconsolidated. FILL: 3 (2.9 - 6.0) Silty CLAY with trace sand, dark brown, moist, wet at 6'. 3.6 2.5 - 5 4 5 29.7 5 - 6 6 (6.0 - 12.0) Sandy CLAY, grayish brown, wet, very soft, low plasticity. 7 3/5 8 9 10 11 12 (12.0 - 15.0) Silty CLAY, trace fine gravel, dark brown, wet, very hard, low to medium 4.5/5 13 14 15 Notes:

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Borehole plugged with bentonite chips and concrete repaired upon completion. Open borehole evaluated with oll/water interface probe. No product indicated in borehole, This boring log should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-RMSB-3 **Exide Technologies** Completion Date: 5/8/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101920.9601 Northing: Field Supervisor: Roberta Russell Easting: 2480184.5299 Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth PID (mdd) Lithologic Sample USÇS (ft) Interval Description 0 (0 - 1.5) CONCRETE SLAB CON (1.5 - 6.2) FILL, clayey sand/sandy clay, grayish brown with orange Fe staining, moist, wet 8.0 1.5 - 2at 6.2', soft, low plasticity. 2 1.9 2 - 2.5 2.7/5 3 FILL 5 5 - 5.5 6 (6.2 - 10.0) Silty CLAY, dark brown, moderate hydrocarbon odor. 2.7/5 8 9 10 (10.0 - 12.0) Sandy CLAY, dark grayish brown, wet, soft, low to medium plasticity. 11 12 (12.0 - 15.0) Silty CLAY, dark brown, wet, very hard, low to medium plasticity. 3.2/5 13 14 15

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Borehole plugged with bentonite chips and concrete repaired upon completion. Open borehole evaluated with oil/water interface probe. No product indicated in borehole. This boring log should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-RMSB-4 **Exide Technologies** DPT 5/7/2013 Drilling Method: Completion Date: Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101919.0213 Field Supervisor: Northing: 2480206.1515 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): Recovery (ft/ft) Lithologic Depth OId (mdd) Sample uscs Interval Description (ft) (0 - 0.3) FILL, gravel (medium), gray, dry, unconsolidated. (0.3 - 3.8) FILL, clayey sand, orange to grayish brown with orange Fe staining, plastic chip noted in this interval while sampling. ō 28 0 - 2 1 2 5/5 3 22 2 - 5 (3.8 - 15.0) CLAY/silty CLAY, dark reddish brown, gravelly clay (~10% medium gravel in clay matrix) from 11.5-11.7', moist, wet at 6.0', firm to hard, low to medium plasticity. 5 1.4 5 - 6 6 1.4 2.5/5 8 9 10 11 12 5/5 13 14 15

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion, Open borehole evaluated with oil/water interface probe. No product indicated in borehole. This boring log should not be used seperately from the report to which it is attached.

### Log of Boring: 2013-RMSB-5 **Exide Technologies** Completion Date: 5/7/2013 **Drilling Method:** DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): 7101877.9929 Tim Jennings, P.G. Field Supervisor: Northing: 2480144.0945 Roberta Russell Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Old (mdd) Lithologic Depth Sample USCS Description (ft) Interval (0 - 1.3) CONCRETE SLAB 0 CON 1 (1.3 - 3.5) FILL, road base, tan, dry. 95.7 1.3 - 2 2 3/5 3 1957 (3.5 - 6.5) FILL, silty clay/clayey silt, ~30% medium gravel with clayey silt/silty clay matrix, tan, very moist, soft, tan, very moist, soft. 600 5 - 7 (6.5 - 15.0) Silly CLAY, dark reddish brown, grayish brown with depth, moist, wet at 9.0', soft to firm, low plasticity, gravelly clay $\{\sim20-30\%$ fine to medium gravel in clay matrix) at 11.0-11.1 and 11.3-11.4', hydrocarbon odor from 9.0-10.0'. 5/5 9 1240 10 11 12 5/5 13 14 15

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

Open borehole evaluated with oil/water interface probe. No product indicated in borehole.

This boring log should not be used seperately from the report to which it is attached.

# Golder

### LOG OF 2013-RMSB-5A

DRILLING METHOD: Direct Push

NORTHING: 7,101,885 FT

DATE/TIME: 01/13/2014, 1615

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,146 FT

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

101712	· · · · · · · · · · · · · · · · · · ·	0 7 1 000		KIG.	Geoprou		SURFACE ELEVATION. N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_						7 4 5 4 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5	0-1.5 FT, Concrete.
			0.0		GM/SM		1.5-2.5 FT, FILL (GM/SM) SILTY GRAVEL, fine to coarse, SAND, coarse; brown; wet, loose.
	1		<u>2.3</u> 2.5				2.5-5.75 FT, (CH) CLAY; black; moist, firm.
_		- NA			СН		5.0 FT, wet, soft.
-5 -	2		<u>4.0</u> 4.0	5-7	GC		5.75-6.25 FT, (GC) CLAYEY GRAVEL; black; wet, loose.
		A PROPERTY OF THE PROPERTY OF	4.U	(1628)	СН		6.25-8.0 FT, (CH) CLAY; black; moist, firm.
							End of borehole at 8.0 FT BGS
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10		177000000000000000000000000000000000000					
						A TOTAL OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Raw Material Storage Bldg	REVIEWED BY:	JW

#### Log of Boring: 2013-RMSB-6 **Exide Technologies** 5/7/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.). 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101879.5177 Northing: Field Supervisor: Logged By: 2480175.057 Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Recovery (ft/ft) Lithologic Depth OIG (ppm) Sample USCS Interval Description (ft) (0 - 1.3) CONCRETE SLAB 0 CON 1 (1.3 - 6.6) FILL, silty clay/clayey silt, trace black staining, moist, soft to firm, low plasticity. 1 1.3 - 2 2 1.5 2 - 2.5 2.5/5 3 4 5 5 - 7 3.7 6 (6.6 - 15.0) Silty CLAY, dark reddish brown, moist, wet at 7.5', soft, low to medium 7 plasticity, moderate hydrocarbon odor. 5/5 7.5 8 9 10 11 12 5/5 13 14 15

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-RMSB-7 **Exide Technologies** Completion Date: 5/8/2013 Drilling Method: Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Northing: 7101881.0426 Tim Jennings, P.G. Field Supervisor: 2480206.0194 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Lithologic Depth OPO (mdd) (FF) Sample USCS Description (ft) Interval (0 - 1.5) CONCRETE SLAB CON 1 (1.5 - 1.7) FILL, clayey sand/sandy clay, orange, moist, soft, low plasticity. (1.7 - 7.0) Silty CLAY, dark brown, moist, wet at 6.5', soft, low plasticity. 1.5 1.5 - 2 2 3/5 3 2.1 2 - 4 4 5 5 - 6 1.5 6 6.5 7 (7.0 - 12.0) Sandy CLAY, grayish brown, wet, soft, low plasticity. 5/5 8 9 10 11 12 (12.0 - 15.0) Sifty CLAY, dark brown, trace calcareous precipitates, wet, very hard, low to medium plasticity. 4.5/5 13 14 15

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion. Open borehole evaluated with oil/water interface probe. No product indicated in borehole This boring log should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-RMSB-8 **Exide Technologies** 5/8/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101841.0881 Northing: Field Supervisor: Roberta Russell 2480146.938 Logged By: Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery PID (mdd) Lithologic Depth (#Z#) Sample USCS (ft) Interval Description ō (0 - 2.1) CONGRETE SLAB 1 CON 2 (2.1 - 3.1) FILL, sandy, gravelly clay, ~10% sand and gravel in clay matrix, tan, moderate 2/5 *Ŷ*ŗĽĽX hydrocarbon odor. 0.4 2.1 - 3.1 3 (3.1 - 5.0) No recovery. NR 5 (5.0 - 10.0) Silty CLAY/clayey SILT, dark reddish brown, wet at 7.5', soft, low to medium 6 1.2 5 - 7 7 3/5 7.5 8 9 10 (10.0 - 10.4) Sandy, gravelly CLAY, ~20% sand and gravel in clay matrix, grayish brown, wet, soft, low to medium plasticity, moderate hydrocarbon odor. (10.4 - 14.2) Sandy CLAY, grayish brown, wet, soft, low to medium plasticity, moderate 11 hydrocarbon odor. 12 5/5 13 14 (14.2 - 14.7) Clayey GRAVEL, ~60% fine to medium gravel, grayish brown, wet, soft, moderate hydrocarbon odor. (14.7 - 15.0) Sandy CLAY, grayish brown, wet, soft, low to medium plasticity, moderate 15 hydrocarbon odor. Borehole plugged with bentonite chips and concrete repaired upon completion.

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Open borehole evaluated with oil/water interface probe. No product indicated in borehole. This boring log should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-RMSB-9 **Exide Technologies** 5/7/2013 DPT Completion Date: Drilling Method: Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7101850.5528 2480176.4834 PBW Project No. 1755 Logged By: Roberta Russell Easting: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/fl) Depth PID (ppm) Sample Interval Lithologic USCS Description (ft) (0 - 1.3) CONCRETE SLAB Ō CON 1 (1.3 - 6.5) FILL, silly clay, orange and brown, moist, soft to firm, low to medium plasticity. 1.3 - 2 2.2 2 2 - 2.5 4,7 3/5 3 4 5 5 - 7 6 4.7 (6.5 - 15.0) Silty CLAY, dark reddish brown, moist, wet at 9.0', soft to firm, low plasticity, greater plasticity with depth, trace gravel from 13.0-15.0', moderate hydrocarbon odor. 5/5 148 8 9 10 11 12 5/5 13 14 15

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion

#### Log of Boring: 2013-RMSB-10 **Exide Technologies** 5/8/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Total Depth (ft): 15 Driller's License: Tim Jennings, P.G. Northing: 7101844.1378 Field Supervisor: 2480208.8629 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Recovery (ft/ft) Lithologic PID (ppm) Depth Sample USCS Description (ft) Interval 0 (0 - 1.3) CONCRETE SLAB CON 1 (1.3 - 3.4) FILL, sandy clay/clayey sand, orange, moist, firm, low plasticity. 1.1 1.3 - 2 2 ŧiţî, 2.2/5 2.5 2 - 3 3 (3.4 - 8.2) Silty CLAY, dark brown, moist, wet at 7.0'. 5 5 - 6 3.7 6 7 5/5 8 (8.2 - 10.0) Sandy CLAY, dark grayish brown, wet, moderate hydrocarbon odor. 9 10 (10.0 - 15.0) Silty CLAY/CLAY, dark brown, wet, firm, medium plasticity, moderate hydrocarbon odor. 11 12 3.5/5 13 14 15

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Note

Borehole plugged with bentonite chips and concrete repaired upon completion.

Open borehole evaluated with oil/water interface probe. No product indicated in borehole.

This boring log should not be used seperately from the report to which it is attached.

			chnol	- 3			=09 01 20111	ng: 2013-RO-1				
					Completi	on Date:	3/5/2013	Drilling Method:	DPT			
Frisco Recycling Center Driller:							Margarito Estrada	Borehole Diameter (in.):	2			
		Frisco,	1.		Driller's L	icense:	58164	Total Depth (ft):	5			
******************				***************************************	Field Sup	ervisor:	Tim Jennings, P.G.	Northing:	7102103.5329			
	PBW	Project N	lo. 1755		Logged E		Roberta Russell	Easting:	2479578.3769			
			·	·····	Sampling	Method:	5' Lined Tube	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS		Lithologic Description							
0		0 - 0.5		(0 - 1.0)	Silty CLA	Y/CLAY, d	ark reddish brown, moist	, soft to firm, low plasticity,				
		0.5 - 1										
1		1 - 1.5			<ul> <li>0 - 1.1) Sandy CLAY, dark reddish brown with trace orange Fe-ox staining, moist, soft, low asticity clay.</li> </ul>							
2	A constant of the constant of	1.5 - 2		(1.1 - 5.0	D) Silty CL. edium pla:	AY/CLAY, sticity.	dark reddish brown, ligh	t brown from 2.5 to 5', wet at :	3.7', moist, soft,			
*	4.5/5		cı		Ţ	-						
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# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-RO-2 **Exide Technologies** 3/5/2013 DPT Completion Date: Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7102126.<del>44</del>39 Field Supervisor: Northing: 2479562.0249 Roberta Russell Easting: PBW Project No. 1755 Logged By: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Depth Sample Lithologic USCS Interva Description (ft) (0 - 4.5) CLAY/silty CLAY, dark reddish brown, moist, firm, low to medium plasticity. 0 0 - 0.5 0.5 - 1 1 1 - 1.5 1.5 - 2 2 4.7/5 3 4 $(4.5 \cdot 4.7)$ Gravelly CLAY, dark reddish brown, wet, soft, low plasticity clay. $(4.7 \cdot 5.0)$ No recovery. 5

# $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2013-RO-3 **Exide Technologies** Completion Date: 3/15/2013 DPT Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 2 Dan Spaust Driller: Frisco, TX Driller's License: 3038 Total Depth (ft): Field Supervisor: Will Vienne, P.G. 7102104.7761 Northing: PBW Project No. 1755 Logged By: Will Vienne, P.G. Easting 2479557.0085 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): \*\* Lithologic Description Depth Sample uscs Interval (ft) (0 - 5.0) Silty CLAY, dark brownish gray, very moist, soft, low to medium plasticity, abundant limestone granules, trace limestone pebbles. Ō 0 - 0.5 1 0.5 - 2 2 3.2/4 2 - 4 3 0.6/1 4 - 5 5

# **PBW**

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Borehole plugged with bentonite chips upon completion.

Colder
Golder
Associates

### LOG OF 2013-RRS-2A

DRILLING METHOD: Direct Push

NORTHING: N/A

DATE/TIME: 01/10/2014, 1215

DRILLER: SCI, Margarito Estrada

EASTING: N/A

TOTAL DEPTH: 12 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_					GC/ML		0-1.0 FT, (GC/ML) CLAYEY GRAVEL and SILT; battery chip fragments; dry, very stiff.
-	1		4.0 4.0		CL		1.0-2.5 FT, (CL) SILTY CLAY, some gravel; light brown, trace organics; dry, very stiff.
							2.5-11.0 FT, (CH) CLAY, trace fine gravel; black; dry, very stiff.
- 5	2	NA	<u>4.0</u> 4.0				4.0 FT, firm.
-			4.0		СН		
- 10	3		<u>4.0</u> 4.0				9.0 FT, very stiff.
-					СН		11.0-12.0 FT, (CH) CLAY; greenish gray; dry, stiff.
							End of borehole at 12 FT BGS
- 15							
-							
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en projection de la manda de l							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Battery Breaker Bldg	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		Log of Bori	ng: 2013-RRS	-3A				
Frisco Recycling Center Frisco, TX  Completic Driller: Driller's Li						3/27/2013 Margarito Estrada 58164	Drilling Method: Borehole Diameter (in.): Total Depth (ft):	DPT 2 5				
PBW Project No. 1755 Logged E Sampling						Tim Jennings, P.G. Roberta Russell 5' Lined Tube	Northing: Easting: Ground Elev. (ft AMSL)	7102073.967 2480071.193				
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS	·	Lithologic Description							
0			CON	(0 - 0.8)	(0 - 0.8) CONCRETE SLAB							
1 ~		0.8 - 2	PILL		) FILL, sandy, gravix, wet to moist, so		parse sand and fine gravel in	high-plasticity				
2 ···· 3 ···	5/5	2-4		(1.9 - 5.8	) FILL, silty clay, tr	ish brown, moist, soft, high pl	asticity,					
4			СН									
5		4 - 5					100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 April 100 Ap					

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-RRS-4A **Exide Technologies** 5/21/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Driller: Dan Spaust Borehole Diameter (in.): 2 Frisco, TX Driller's License: 3038 Total Depth (ft): Tim Jennings, P.G. 7102060.752 Northing: Field Supervisor: Logged By: Tim Jennings, P.G. Easting: 2480183.5008 PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/ft) Depth Lithologic Sample USCS (ft) Interval Description 0 (0 - 0.9) CONCRETE SLAB CON 1 (0.9 - 3.0) FILL, gravel, clay and sand fill, dry, possible stag fragment at 2.0', refusal at 3.0' at apparent concrete. 0.9 - 2 3/3 2 2 - 3 3

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

# Golder

### LOG OF 2013-RRS-4A-A

DRILLING METHOD: Direct Push

NORTHING: 7,102,058 FT

DATE/TIME: 01/13/2014, 1645

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,186 FT

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

TOTAL	DEP In.			RIG:	Geoproo	,	SURFACE ELEVATION: N/A	
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS	
_					GP/SP	44444	0-1.25 FT, CONCRETE and FILL.  1.25-1.5 FT, FILL (GP/SP) GRAVEL, fine, and SAND, coarse; wet.	
			2.5	3-4 - (1652) 4-5 (1653)	an and an and an an an an an an an an an an an an an	CH/GC		1.5-2.5 FT, (CH/GC) GRAVELLY CLAY; dark brown; moist, soft-firm.
_	1	NIA.	<u>2.5</u> 2.5		СН		2.5-5.0 FT, (CH) CLAY; dark brown; dry, firm-stiff.	
-5		- NA					5.0-6.0 FT, (GC) CLAYEY GRAVEL; light brown; wet, compact.	
	2		4.0 4.0		GC		6.0-8.0 FT, (CL) SILTY CLAY, some gravel; moist, very soft.	
_		Total Property of the Control of the			CL			
						<i>Y///</i>	End of borehole at 8.0 FT BGS	
<b>-</b> 10		1				p.ore		
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Battery Breaker Bldg	REVIEWED BY:	JW

#### Log of Boring: SCC-3 **Exide Technologies** DPT Drilling Method: Completion Date: 3/5/2013 Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101666.6928 Northing: Field Supervisor: 2480460.5413 Roberta Russell Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ff) Depth Sample Lithologic USCS Description Interval (ft) (0 - 3.6) FILL, dark reddish brown, silly clay with sand and gravel, plastic chip at 1', moist, soft to 0 0 - 0.5 firm, low plasticity. 1 0.5 - 22 5/5 3 2 - 4 (3.6 - 4.1) SILT w/GRAVEL,~30-40% gravel, light reddish brown, fine to medium grained gravel. ML 4 (4.1 - 5.0) Silty CLAY, dark reddish brown, moist, firm, medium plasticity. 4 - 5 5

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

	Exi	de Te	chnol	ogies		_og of Boriı	ng: SCC-3A				
<b></b>	<del>(</del>				Completion Date:	3/5/2013	Drilling Method:	DPT			
	Frisco	Recyclin		r	Driller:	Margarito Estrada	Borehole Diameter (in.):	2			
		Frisco, 7	ГХ		Driller's License:	58164	Total Depth (ft):	5			
					Field Supervisor:	Tim Jennings, P.G.	Northing:	7101641.6386			
	PRW I	Project N	lo 1755		Logged By:	Roberta Russell	Easting:	2480461,4981			
	, 5,,,	10,00011			Sampling Method:	5' Lined Tube	Ground Elev. (ft AMSL):	**			
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs	Lithologic Description							
0		0 - 0.5	//¢C//	(0 - 0.5)	Sandy CLAY, dark r	eddish brown, moist, sof	t, low plasticity clay.				
1		0.5 - 2		(0.5 - 4.) plasticity		h brown, abundant black	staining from 3-4', moist, we	t at 3°, soft, high			
3	4.4/5	2 - 4	ch								
4	11 / 12 / 12 / 12 / 12 / 12 / 12 / 12 /	4 - 5	ÇĽ	(4.0 - 5.	0) Sandy CLAY, light	grayish brown, trace bla	ick staining, wet, soft, low pla	sticity clay.			

# PBW

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

# Golder

### LOG OF SCC-5A

DRILLING METHOD: Direct Push

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NORTHING: 7,101,692 FT

DATE/TIME: 01/10/2014, 0900

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,025 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_	1	NA	4.0 4.0	0.0-0.5 (0859)	СН		0.0-2.5 FT, (CH) CLAY, trace fine gravel; brown; moist, firm.
-				•	CL		2.5-3.25 FT, (CL) SILTY CLAY, trace gravel; brown, layered, friable; stiff.
					СН		3.25-4.0 FT, (CH) CLAY, trace fine gravel; brown; moist, firm.
<b>5</b>							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Stewart Creek Corridor	REVIEWED BY:	JW

# Golder

### LOG OF SCC-5B

DRILLING METHOD: Direct Push

NORTHING: 7,101,661 FT

DATE/TIME: 01/10/2014, 0845

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,068 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

	JEI III.	4 1 1 1 1 1 1 1		KIG.	Geoproo	,	SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
			,	0005	СН		0.0-0.3 FT, TOPSOIL - (CH) CLAY; brown; damp, soft.
				0.0-0.5 (0851)	GP/SP	000	0.3-0.75 FT, (GP/SP) SANDY GRAVEL; brown; damp, loose.
- 1				`			0.75-4.0 FT, (CH) CLAY; dark brown; moist, firm.
-	1	NA	3.0 4.0				
			4.0		СН		
<b>†</b>						////	End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Stewart Creek Corridor	REVIEWED BY:	JW

#### Log of Boring: SCC-10 **Exide Technologies** DPT Drilling Method: Completion Date: 3/5/2013 Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): 7102156.5364 Tim Jennings, P.G. Field Supervisor: Northing: 2479518.8436 Roberta Russell Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Depth Sample uscs Interval Description (ft) (0 - 0.7) FILL, dark reddish brown, silty clay with gravel, dry, soft. Ö FILE (0.7 - 3.0) Silty CLAY, dark reddish brown, moist, soft, low to medium plasticity. 1 0.5 - 2CL 2 4.5/5 3 2 - 4 (3.0 - 5.0) Silty SAND, ~30% calcareous sand, dark reddish brown, dry, soft. 4 SW 4 - 5 5

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

#### Log of Boring: SCC-10A **Exide Technologies** Completion Date: 3/5/2013 DPT Drilling Method: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7102143.1089 PBW Project No. 1755 Logged By: Roberta Russell Easting: 2479512.8889 Sampling Method: Ground Elev. (ft AMSL): --5' Lined Tube Recovery (ft/ft) Depth Sample Lithologic USCS Interval Description (ft) ō (0 - 1.8) Silly CLAY, dark red to reddish brown, abundant orange Fe-ox staining, moist, soft, low 0 - 0.5plasticity. CL 1 0.5 - 2 (1.8 - 2.3) Sandy CLAY/clayey SAND, dark reddish brown, some orange Fe-ox staining, moist, soft, 2 CLISC low plasticity clay. (2.3 - 4.0) Silty CLAY/CLAY, dark reddish brown, moist, soft, low to medium plasticity. 5/5 2 - 4 3 CL 4 (4.0 - 4.9) Gravelly CLAY, ~20% medium gravel, light reddish brown, moist, soft, low plasticity clay. 4 - 5 5 (4.9 - 5.0) CLAY, light reddish brown, wet, soft, medium plasticity.

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.



### LOG OF SCC-10B

DRILLING METHOD: Direct Push

NORTHING: 7,102,140 FT

DATE/TIME: 01/13/2014, 1200

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,514 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

	L DLF III.	111 000		NIG.	Geopioi		SUNFACE ELEVATION. IVA
DEPTI (Feet	H RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1204)	CL		0.0-1.0 FT, (CL) CLAY, some silt; black; dry, stiff.
_	1	NA	<u>3.3</u> 4.0		SM		1.0-2.5 FT, (SM) SILTY SAND; brown; moist, compact.
_					СН		2.5-4.0 FT, (CH) CLAY, trace fine gravel; dark gray and black, reddish brown mottling; moist, soft-firm.
-5	:						End of borehole at 4 FT BGS
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_	THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PART OF THE PA						
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Southwest Side of Slag Landfill	REVIEWED BY:	JW

#### Log of Boring: SCC-11 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: Hand Auger Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 3 Frisco, TX Driller's License: 58164 Total Depth (ft): Northing: 7102319.6421 Tim Jennings, P.G. Field Supervisor: 2479301.9603 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 3"X6" Hand Auger Lithologic Description Depth Sample uscs Interval (ft) (0 - 4.0) Silty CLAY/CLAY, dark reddish brown, greater plasticity with depth, moderate orange Fe-ox staining, moist, firm to hard, low to medium plasticity. 0.5/0.5 0.5/0.5 0.5/0.5 0.5 - 2 0.5/0.5 2 CL 0.5/0.5 0.5/0.5 3 2 - 4 0.5/0.5 0.5/0.5

 $\mathbf{PBW}$ 

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Borehole plugged with bentonite chips upon completion.

-	Exi	de Te	chnol	ogies			Log of Bori	ng: SCC-11A				
					Completi	on Date:	3/6/2013	Drilling Method:	Hand Auger			
			ng Cente	r	Driller:		Margarito Estrada	Borehole Diameter (in.)	: 3			
Frisco, TX Driller's					Driller's License:		58164	Total Depth (ft):	3			
Field Su					Field Sup	ervisor:	Tim Jennings, P.G.	Northing:	7102283.5451			
	PBW Project No. 1755 Log					Зу:	Roberta Russell	Easting:	2479298.0939			
		_			Sampling	Method:	3"X6" Hand Auger	ger Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (ft/ft)	Sample interval	USCS		Lithologic Description							
0	0.5/0.5	0 - 0.5		(0 - 3.0)	Silty CLAY	r, dark red	ldish brown, trace red F	e staining, moist, soft to firm,	low plasticity.			
1	0.5/0.5											
	0.5/0.5	0.5 - 2							*			
2	0.5/0.5											
	0.5/0.5	2 - 3										
3	0.5/0.5	2-5										

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion,

#### Log of Boring: 2012-SDA-1 **Exide Technologies** Drilling Method: Geoprobe 1/4/2012 Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2.25 Drilling Company: StrataCore Frisco, TX Driller: Mario Robles Total Depth (ft): 7101558.98 Driller's License: 52694 Northing: Christopher Moore, P.G. 2480088.96 Easting: Logged By: PBW Project No. 1755 Sampling Method: 2"x 4' Barrel Ground Elev. (ft AMSL): Recovery (ff/ff) Depth Sample Lithologic Description USCS (ft) Interval (0 - 3.0) SILTY CLAY, CL, light olive brown, moist, soft, medium plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor. 0 0-2 1 2 4.0/4.0 (3.0 - 4.0) SILTY CLAY, CL, grayish brown, moist, soft to firm, medium plasticity, fractured, orange 3 2-4 staining in fractures, no foreign material observed, no odor.

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Boring location hand probed to 4.0 feet to check for utilities.
Borehole plugged with bentonite chips upon completion,
This Log of Boring should not be used seperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		Log of Boring: 2012-SDA-2				
			**************************************		Complet	ion Date:	1/4/2012	Drilling Method:	Geoprobe	
l		Recyclin		Γ	Drilling C	Company:	StrataCore	Borehole Diameter (in.):	2.25	
	Frisco, TX						Mario Robies	Total Depth (ft):	4	
}	Driller's						52694	Northing:	7101557.95	
	PBW Project No. 1755 Logo					Ву:	Christopher Moore, P.G.	Easting:	2480184.84	
					Sampling Method:		2"x 4' Barrel	Ground Elev. (ft AMSL):	_	
Depth (ft)	Recovery (ft/ft)	Sample Interval	uscs		Lithologic Description					
1		0-2		(0 - 4.0) carbona	SILTY CL te nodules	AY, CL, da s, no stainìi	irk grayish brown, moist, s ng or foreign material obse	oft to firm, medium plasticity rved, no odor.	y, trace sand size	
3	4.0/4.0	2-4								
4						······································				

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes: Boring location hand probed to 4,0 feet to check for utilities. Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-SDA-3 **Exide Technologies** Drilling Method: Geoprobe Completion Date: 1/4/2012 Frisco Recycling Center Frisco, TX Borehole Diameter (in.): 2.25 **Drilling Company:** StrataCore Mario Robles Total Depth (ft): Driller: Northing: 7101552.75 Driller's License: 52694 2480291.52 Logged By: Christopher Moore, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: | 2"x 4' Barrel Depth Sample Lithologic Description USCS (ft) Interval (0 - 4.0) SILTY CLAY, CL, very dark gray, moist, soft, medium plasticity, trace sand size carbonate nodules, no staining or foreign material observed, no odor. 0 0-2 2 4.0/4.0 3

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Boring location hand probed to 4,0 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

This Log of Boring should not be used separately from the report to which it is altached.

#### Log of Boring: 2013-SDA-3A **Exide Technologies** Completion Date: 3/4/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7101576.8349 Field Supervisor: Northing: Logged By: Will Vienne, P.G. Easting: 2480331.1409 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/fl) Lithologic Depth Sample uscs (ft) Interval Description (0 - 5.0) Silly CLAY, dark brownish gray, trace limestone pebbles and granules, slightly moist, slightly soft to slightly firm, low to medium plasticity. ō 0 - 0.5 1 0.5 - 22 5/5 3 2 - 4 4 4 - 5

### $\mathbf{PBW}$

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Borehole plugged with bentonite chips upon completion.

# Golder

### LOG OF 2013-SDA-3B

DRILLING METHOD: Direct Push

NORTHING: 7,101,606 FT

DATE/TIME: 01/09/2014, 1600

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,328 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
, , ,		-	,	0.0-0.5 (1605)	CL		0-1.0 FT, (CL) SILTY CLAY, some fine gravel; dark brown; dry, firm.
-	1	NA	<u>3.0</u> 4.0		СН		1.0-3.0 FT, (CH) CLAY; brown; moist, soft.
-					СН		3.0-4.0 FT, (CH) CLAY, some gravel; black; dry, stiff.
-5					·		End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Disposal Area	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		Log of Boring: 2012-SDA-4				
			***************************************		Completi	on Date:	1/4/2012	Drilling Method:	Geoprobe	
	Frisco Recycling Center Drilling (					ompany:	StrataCore	Borehole Diameter (in.):	2.25	
	Frisco, TX Driller					uccusuritument former	Mario Robles	Total Depth (ft):	4	
<b>}</b>	Driller's						52694	Northing:	7101174.44	
PBW Project No. 1755					Logged E	3у:	Christopher Moore, P.G.	Easting:	2479970.62	
l	1 200 1 10,000 110 11 00					Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	**	
Depth (ft)	Recovery (ft/ff)	Sample Interval	uscs		Lithologic Description					
2 3	4.0/4.0	0-2 2-4	2 A COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DE LA COMMONDO A DEL COMMONDO A DEL COMMONDO A	no stainii (0.3 - 4.0	ng or forei ) SILT, MI	gn materia L, very pali	l observed, no odor.	soft, low to medium plastic one, dry to moist, very soft, ial observed, no odor.		

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borahole plugged with bentonite chips upon complation.
This Log of Boring should not be used separately from the report to which it is attached.

	Exi	ide Te	chnol	ogies			Log of Bori	ng: 2013-SDA	-4A		
			_		Completion	Date:	3/4/2013	Drilling Method:	DPT		
Frisco Recycling Center Driller:							Margarito Estrada	Borehole Diameter (in.):	2		
Frisco, TX Driller's L						ense:	58164	Total Depth (ft):	5		
		····	***************************************	<del></del>	Field Super	rvisor:	Will Vienne, P.G.	Northing:	7101587.5249		
PBW Project No. 1755 Logged E							Will Vienne, P.G.	Easting:	2480227.9279		
	,		<del> </del>		Sampling Method:		5' Lined Tube	Ground Elev. (ft AMSL):			
Depth (ft)	Recovery (ft/ft)	Sample Interval	USCS		Lithologic Description						
0		0 - 0.5						bundant limestone pebbles ar			
1 -		0.5 - 2					with abundant roots, trac firm, low to medium plas	ce carbonate granules and pe ticity.	ddies delow U. 7		
2											
3	5/5	2-4	GL								
4		6									
_		4-5									

### $\mathbf{PBW}$

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Borehole plugged with bentonite chips upon completion.



### LOG OF 2013-SDA-4B

DRILLING METHOD: Direct Push

NORTHING: 7,101,638 FT

DATE/TIME: 01/10/2014, 0830

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,213 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	NA	<u>3.5</u> 4.0	0.0-0.5 (0841)	СН		0-4.0 FT, (CH) CLAY; brown; moist, soft.  1.0 FT, fine gravel lens (~3 inches).
_							End of borehole at 4 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Disposal Area	REVIEWED BY:	JW

	Exic	de Te	chnol	ogies		Log of Boring: 2012-SDA-5				
					Complet	on Date:	1/4/2012	Drilling Method:	Geoprobe	
		Recyclin		r	Drilling C	company:	StrataCore	Borehole Diameter (in.):	2.25	
	Frisco, TX					economic visitation and a second	Mario Robles	Total Depth (ft):	2.9	
	Drille					_icense:	52694	Northing:	7101170.31	
PBW Project No. 1755					Logged	By:	Christopher Moore, P.G.	Easting:	2480098.36	
	1 577 1	TOJCOLT	o. 1100		Sampling Method: 2"x 4' Barrel Ground Elev. (ft AMSL): -				-	
Depth (ft)	Recovery (ff/ft)	Sample Interval	uscs		Lithologic Description					
0		0-2	*	(0 - 1.1) odor. 0.9	SILT, ML, -1.1: lime	brown, mo stone fragi	oist, soft, low plasticity, no s nents.	taining or foreign material	observed, NO	
1	2.9/2.9	0-2	ML	(1.1 - 2.9 some lin	ne, dry to moist, very soft, al observed, no odor.	non-plastic,				
2 ***		2-2,9	******					and the contract of the contra	na og aktiveligist og gjelegelegen kala storrernernernernernernerne	

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Notes:
Boring location hand probed to 1.5 feet to check for utilities.
Borehole plugged with bentonite chips upon completion.
Refusal at 2.9
This Log of Boring should not be used seperately from the report to which it is attached.

### LOG OF 2014-SDA-6

DRILLING METHOD: Direct Push

NORTHING: 7,101,659 FT

DATE/TIME: 03/31/2014, 1445

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,999 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 636 FT AMSL

101712		311003			Geopiul		SOIN AGE ELEVATION, 03011 ANIGE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LOG	
				0.0-0.5 (1451)	ML		0.0-1.0 FT, (ML) CLAYEY SILT, some gravel, trace organic material; dark brown; dry, hard.
_	1	N/A	<u>4.8</u> 5.0	0.5-2.0 (1452)	СН		1.0-2.75 FT, (CH) CLAY; black; dry, soft-firm.
_		T T T T T T T T T T T T T T T T T T T	3.0	2.0-4.0 (1453)	СН		2.75-4.0 FT, (CH) CLAY; gray and brown, reddish yellow mottling; damp, hard.
							4.0-5.0 FT, Not Logged.
<b>5</b>							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Disposal Area	REVIEWED BY:	JW

# Golder

### LOG OF 2014-SDA-7

DRILLING METHOD: Direct Push

NORTHING: 7,101,210 FT

DATE/TIME: 03/31/2014, 1530

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,015 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 676 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
		-		0.0-0.5 (1535)	CH GP/ML		0.0-0.25 FT, (CH) CLAY; black; dry, hard. 0.25-1.0 FT, (GP/ML) SANDY GRAVEL and SILT; gray and brown; dry, loose.
-				0.5-2.0 (1536)			1.0-4.0 FT, (CL) SILTY CLAY; brown, platy, friable; dry, hard.
_	1	N/A	<u>5.0</u> 5.0	(1330)	CL		
_	·		5.0	2.0-4.0 (1537)			
_				(1337)			4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	South Disposal Area	REVIEWED BY:	JW

	Exic	de Te	chnol	ogies		J	_og of Borin	g: 2012-SL-1	
<u> </u>			AMMININI/AMMINI		Completi	on Date:	1/10/2012	Drilling Method:	Geoprobe
			ig Cente	r	Drilling C	ompany:	StrataCore	Borehole Diameter (in.):	2.25
		Frisco,	ΓX		Driller:	aaanateenomeesteestuori	Mario Robles	Total Depth (ft):	5.5
<del></del>	-lutuurummattaiiii	***************************************			Driller's L	icense:	52694	Northing:	7102343.75
	PRW F	roiect N	lo. 1755		Logged E	Зу:	Christopher Moore, P.G.	Easting:	2479384.49
		,0,00.			Sampling	Method:	2"x 4' Barrel	Ground Elev. (ft AMSL):	
Depth (ft)	Recovery (ft/ft)	Old (mdd)	Sample Interval	uscs	Lithologic Description				
1	4.D/4.0	0	0-2		(0 - 5.5) C odor. 2.0	CLAY, CH, -2.5; with b	dark gray, moist, firm, met plack, gravel size slag frag	flum plasticity, fill, with angoments.	olar gravel, no
3 ***	7,0,7,0	0.1	2-4	ĊĦ.					
4 5	0/1.5	<u> </u>							

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Noties:

Borring location hand probed to 2.0 feet to check for utilities.

Borehole plugged with bentonite chips upon completion.

No recovery below 4.0 feet Refusel at 5,5 feet.

This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-SL-1 **Exide Technologies** DPT 3/6/2013 Drilling Method: Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Will Vienne, P.G. 7102343,7519 Field Supervisor: Northing: 2479384.4867 Roberta Russell Easting: PBW Project No. 1755 Logged By: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Sample Lithologic USCS Interval Description (ft) (0 - 0.6) FILL, clayey silt, dark reddish brown, moist, soft, low plasticity. 0 (0.6 - 1.6) FILL, silty clay, light grayish brown, orange Fe staining, moist, firm, low plasticity. PILL 1 (1.6 - 2.5) CLAY, dark gray, dry. 2 CL 3.6/5 (2.5 - 3.0) FILL, silty clay, trace gravel, gray, abundant orange staining, moist, firm, low plasticity. 3 (3.0 - 6.0) FILL, abundant slag, dark gray, dry. 4 4 - 5 5 0.5/1 5 - 6 6

### **PBW**

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Borehole plugged with bentonite chips upon completion.

#### Log of Boring: 2012-SL-2 **Exide Technologies** 1/10/2012 Drilling Method: Geoprobe Completion Date: Frisco Recycling Center Frisco, TX Borehole Diameter (in.): 2.25 Drilling Company: StrataCore Driller: Mario Robles Total Depth (ft): 7102486.2 Northing: 52694 Driller's License: Christopher Moore, P.G. Easting: 2479520.54 Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): Sampling Method: 2"x 4' Barrel Recovery (ff/ff) Lithologic Description 다. (mgd) Depth Sample USCS (ft) Interval (0 - 1.2) CLAY, CH, dark gray, moist, soft, medium plasticity, no staining or foreign 0 material observed, no odor. 0-2 0 (1.2 - 8.0) CLAY, CH, light grayish brown and light gray, moist, soft to firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor. 7.5: Wet, silty. 2 4.0/4.0 3 4 0 5 4.0/4.0 0 7 0 8

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes

Boring location hand probed to 4.5 feet to check for utilities. Borehole plugged with bentonite chips upon completion.

Saturated soils encountered at 7,5 feet. Boring terminated at 8.0 feet and water sample collected from base of boring. This Log of Boring should not be used separately from the report to which it is attached.

#### Log of Boring: 2012-SL-3 **Exide Technologies** Drilling Method: Geoprobe Completion Date: 1/10/2012 Frisco Recycling Center Borehole Diameter (in.): 2.25 Drilling Company: StrataCore Frisco, TX Total Depth (ft): 12 Driller: Mario Robles 7102514.89 52694 Driller's License: Northing: 2479697.92 Logged By: Christopher Moore, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL) Sampling Method: 2"x 4' Barrel Lithologic PD (mdd) Depth Sample uscs Description Interval (ft) (0 - 3.5) CLAY, CH, dark gray, moist, soft to firm, medium plasticity, no staining or foreign Ō material observed, no odor. 0 0-2 1 2 4.0/4.0 3 0.1 (3.5 - 9.0) CLAY, CH, light grayish brown and light gray, moist, firm, medium plasticity, some sand size carbonate nodules, no staining or foreign material observed, no odor. 5 0 6 4.0/4.0 0.1 8 0.1 8-10 (9.0 - 12.0) CLAY, CH, light gray, moist, firm to hard, high plasticity, laminated, orange staining along laminations, fractured, no foreign material observed, no odor. 10.3-10.8: 9 sand laminae, wet. 10 3.5/4.0 0.1 12

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

#### Notes

Boring location hand probed to 4.0 feet to check for utilities.

Borehole plugged with bentonile chips upon completion.

Saturated soils encountered at 10.3 feet. Boring terminated at 12.0 feat and water sample collected from base of boring.

This Lag of Boring should not be used seperately from the report to which it is attached.

#### Log of Boring: 2013-SL-4 **Exide Technologies** Drilling Method: 3/7/2013 Completion Date: Hand Auger Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 3 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7102263.8969 PBW Project No. 1755 Logged By: Roberta Russell Easting: 2479414.9719 Sampling Method: 3"X6" Hand Auger Ground Elev. (ft AMSL): --Recovery (ft/ft) Lithologic Description Depth Sample USCS Interval (ft) (0 - 4.0) Silly CLAY/clayey SILT, dark brown, orange and red Fe staining, $\sim$ 10% calcareous nodules, moist, soft to firm, low plasticity. 0 0.5/0.5 0 - 0.5 0.5/0.5 1 0.5/0.5 | 0.5 - 2 0.5/0.5 2 CLIMI 0.5/0.5 0.5/0.5 3 2 - 4 0.5/0.5 0.4/0.5

### **PBW**

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Borehole plugged with bentonite chips upon completion.



### LOG OF 2014-SL-5

DRILLING METHOD: Direct Push

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NORTHING: 7,102,602 FT

DATE/TIME: 03/31/2014, 1115

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,957 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 634 FT AMSL

		311 003			Geopioi		OON ACE ELEVATION. 004117 MINDE
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	uscs	GRAPHIC LÓG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1122)	ML		0.0-1.0 FT, (ML) CLAYEY SILT; dark brown; dry, soft-firm.
_				0.5-2.0 (1123)	ML		1.0-2.25 FT, (ML) SANDY SILT, some clay, some fine gravel; brown, reddish yellow mottling; dry, firm.
	1	N/A	<u>3.5</u> 5.0	2.0-4.0 (1124)	СН		2.25-4.0 FT, (CH) CLAY, some fine gravel; gray, reddish yellow mottling, trace carbon nodules; damp, soft-firm.
							4.0-5.0 FT, Not Logged.
-5					•		End of borehole at 5 FT BGS
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<b>-</b> 15							
_				and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Landfill	REVIEWED BY:	JW



### LOG OF 2014-SL-6

DRILLING METHOD: Direct Push

NORTHING: 7,102,477 FT

DATE/TIME: 03/31/2014, 1145

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,401 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 632 FT AMSL

TOTALL	JEP I H:	311 003		RIG:	Geopron		SURFACE ELEVATION: 632 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		, , ,	, , ,	0.0-0.5 (1149)	CL		0.0-1.0 FT, (CL) SILTY CLAY, trace fine gravel; dark brown, reddish yellow mottling; dry, stiff.
-	1	N/A	<u>3.8</u> 5.0	0.5-2.0 (1150)	СН		1.0-2.75 FT, (CH) CLAY, trace gravel; brown; dry, soft-firm.
-			5.0	2.0-4.0 (1151)	ML/CH		2.75-4.0 FT, (ML/CH) GRAVELLY SILT and CLAY, some sand; brown, reddish yellow mottling, trace calcareous nodules; moist, firm. 3.5 FT, GRAVELLY SAND for 0.25 FT.  4.0-5.0 FT, Not Logged.
_							
- <b>5</b> -						A CONTRACTOR CONTRACTO	End of borehole at 5 FT BGS
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Landfill	REVIEWED BY:	JW



### LOG OF 2014-SL-7

DRILLING METHOD: Direct Push

MEETING METINGE. Direct Fusi

NORTHING: 7,102,412 FT

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,287 FT

TOTAL DEPTH: 5 FT BGS

DATE/TIME: 03/31/2014, 1200

RIG: Geoprobe

SURFACE ELEVATION: 637 FT AMSL

		·			Geoplon		SURFACE ELEVATION, 637 FT AWISL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0005	ML	11/2 1/1/2	0.0-0.5 FT, TOPSOIL (ML) SILT; dark brown; dry, stiff.
-	1	N/A	<u>4.0</u> 5.0	0.0-0.5 (1210) 0.5-2.0 (1211) 2.0-4.0 (1212)	СН		0.5-4.0 FT, (CH) CLAY; dark brown and black; dry, very stiff-hard.
_							
-5							End of borehole at 5 FT BGS
-10							
- 15 - -							
_							

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Landfill	REVIEWED BY:	JW

#### **Exide Technologies** Log of Boring: SRB-VS-9 5/21/2013 Completion Date: Drilling Method: DPT Frisco Recycling Center Driller: Dan Spaust Borehole Diameter (in.): 2 Frisco, TX Driller's License: 3038 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7101361.944 PBW Project No. 1755 Logged By: Tim Jennings, P.G. Easting: 2479938.26 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery Depth Sample Lithologic uscs Interval (ft) Description 0 (0 - 3.1) Silty CLAY, brown, dry to moist, firm, medium plasticity. 1 0.9 - 2 4/4 2 - 4 3 (3.1 - 5.0) Weathered shale, brown, moist to dry, hard. 3H--1/1 4 - 5

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips upon completion.

### **LOG OF SRB-VS-9E**

DRILLING METHOD: Direct Push

DATE/TIME: 01/10/2014, 1400

DRILLER: SCI, Margarito Estrada

NORTHING: 7,101,364 FT

EASTING: 2,479,894 FT

SURFACE ELEVATION: N/A

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

REC (Feet) DEPTH RUN PID SAMPLE USCS DESCRIPTION AND COMMENTS (Feet) (PPM) No. 0.0-2.0 FT, (CH) CLAY; gray and brown; moist, soft-firm. 0.0-0.5 (1408) СН 1 NA 2.0-3.0 FT, (CH) CLAY; brown; dry, very stiff. CH 3.0-4.0 FT, SHALE and CLAY; gray and reddish brown, yellow mottling, friable; dry, hard. End of borehole at 4 FT BGS - 5 <del>--</del> 10 - 15

PROJECT NO:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Shooting Range Berm & S. Berm	REVIEWED BY:	JW

# Golder

### LOG OF SRB-VS-11A

DRILLING METHOD: Direct Push

NORTHING: 7,101,205 FT

DATE/TIME: 01/10/2014, 1415

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,919 FT

TOTAL DEPTH: 4 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

		4 - 1 0 0 0		RIG.	Geoproc		SURFACE ELEVATION: N/A
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
				0.0-0.5 (1416)	CL		0.0-1.0 FT, (CL) SILTY CLAY; dark brown; moist, firm-stiff.
	1	NA	<u>3.8</u> 4.0		СН		1.0-3.5 FT, (CH) CLAY, trace fine gravel; reddish brown, platy, friable; dry, very stiff.
					GP/SP	000	3.5-4.0 FT, (GP/SP) SANDY GRAVEL; light brown; dry, loose.
5							End of borehole at 4 FT BGS
<u>-</u> 10							
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Shooting Range Berm & S. Berm	REVIEWED BY:	JW



### **LOG OF SRB-VS-11B**

DRILLING METHOD: Direct Push

NORTHING: 7,101,204 FT

DATE/TIME: 03/31/2014, 1545

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,918 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 683 FT AMSL

	,	3 F1 BG3			Geoprou		SURFACE ELEVATION: 003 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESÇRIPTION AND COMMENTS
-	1	N/A	<u>4.5</u> 5.0	0.5-2.0 (1546) 2.0-4.0 (1547)	ML		0.0-4.0 FT, (ML) CLAYEY SILT; dark gray, platy, friable; dry, hard.  1.5 FT, brown, white calcareous nodules.
_						7121212	4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
				77772			
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<b>−15</b>							
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-		TO STATE OF THE ST					
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Shooting Range Berm & South Berm	REVIEWED BY:	JW

#### Log of Boring: 2013-STB-1 **Exide Technologies** Completion Date: 3/6/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Northing: 7101857.2181 Will Vienne, P.G. Field Supervisor: 2480006.9654 Logged By: Roberta Russell Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): --Sampling Method: 5' Lined Tube Recovery (ft/ft) Sample Interval Lithologic Description Depth uscs (ft) (0 - 0.7) CONCRETE SLAB 0 CON (0.7 - 3.0) FILL, gravel with sand and clay, light brown, wet (possibly from concrete corer), unconsolidated or soft clay. 0 - 2 1 FILL 2 3.6/5 3 2 - 4 (3.0 - 5.0) SILTY CLAY/CLAY, dark brown to black, very moist, soft, low to medium plasticity. 4 4 - 5 5

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-STB-2 **Exide Technologies** DPT 3/7/2013 Drilling Method: Completion Date: Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101809.889 Field Supervisor: Northing: 2480060.3992 Logged By: Roberta Russell Easting: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) Depth PID (mdd) Sample Lithologic USCS (ft) Interval Description 0 (0 - 1.0) CONCRETE SLAB CON 1 (1.0 - 3.0) FILL, light to dark brown, gravel. 2 FILL 2.5/5 3 (3.0 - 3.4) FILL, light yellowish brown, clayey gravel, moist, firm. 0.7 2.5 - 4 (3.4 - 5.0) SILTY CLAY, dark brown, ~10% calcareous nodules, moist, firm to hard, low plasticity. 4 1.7 4 - 5 5

### $\mathbf{PBW}$

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Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-STB-3 **Exide Technologies** 3/6/2013 Completion Date: Drilling Method: DPT Frisco Recycling Center Frisco, TX Margarito Estrada Borehole Diameter (in.): 2 Driller: Driller's License: 58164 Total Depth (ft): Field Supervisor: Tim Jennings, P.G. Northing: 7101843.085 2480095.1282 PBW Project No. 1755 Logged By: Roberta Russell Easting: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Sample Lithologic USCS Interval Description (ft) Ō (0 - 0.7) CONCRETE SLAB CON (0.7 - 2.0) FILL, gravelly clay, $\sim$ 10-20% medium gravel, yellowish brown, wet (possibly from concrete corer), firm, low plasticity. 0-2 PILL 2 (2.0 - 5.0) CLAY, dark gray, moist, firm to hard, medium to high plasticity. 3.7/5 3 2 - 4 CH 4 - 5 5

### **PBW**

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Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-STB-4 **Exide Technologies** DPT Drilling Method: Completion Date: 3/6/2013 Frisco Recycling Center Borehole Diameter (in.): 2 Margarito Estrada Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101763.9043 Field Supervisor: Northing: 2480125.1415 Roberta Russell Easting: Logged By: PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) PID (ppm) Depth Sample Lithologic USCS (ft) Interval Description (0 - 1.0) CONCRETE SLAB 0 CON 0 - 2 1 (1.0 - 2.0) FILL, gravel, wet (possibly from concrete corer). FILL (2.0 - 5.0) Silly CLAY, black to dark gray, moderate hydrocarbon odor, wet, soft, low plasticity. 2 2.7/5 3 2-4 22 CL 4 4 - 5 5

### **PBW**

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Borehole plugged with bentonite chips and concrete repaired upon completion.

# Golder

### LOG OF 2013-STB-4A

DRILLING METHOD: Direct Push

NORTHING: 7,101,776 FT

DATE/TIME: 01/13/2014, 1600

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,135 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

DEPTH (Feet) RUN (PPM) REC (PPM) REC (Feet) SAMPLE USCS GRAPHIC LOG DESCRIPTION AND COMMENT O-0.75 FT, Concrete.	TS
GP/SP	
GP/SP XXX 0.75-1.0 FT, FILL - (GP/SP) SAND, coarse, and Gi	
wet, loose.	RAVEL, fine; light brown;
1.0-4.5 FT, (CH) CLAY; black; moist, soft-firm.	
1 NA $\frac{3.0}{3.0}$ CH	
2-4 (1607)	
(1607) 4.0 FT, damp, soft.	
GP 4.5-4.75 FT, (GP) SANDY GRAVEL; black; wet, loc CH 4.75-5.0 FT, (CH) CLAY; black; dry, stiff.	ose.
End of borehole at 5.0 FT BGS	
-10	
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-15	
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PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	Slag Treatment Bldg	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		Log of B	oring: 2013-ST	B-5			
	Frisco Recycling Center Frisco, TX  F  PBW Project No. 1755					e; 3/14/2013 Dan Spaust : 3038	Drilling Method: Borehole Diameter Total Depth (ft):	DPT (in.): 2 1.5			
						r: Will Vienne, P.G Will Vienne, P.G od: 4' Lined Tube	aarii aadaa aadaa aa aa aa aa aa aa aa aa aa	7101810.1084 2480039.3263 (SL):			
Depth (ft)	Recovery (fl/ft)	PID (ppm)	Sample Interval	uscs		Lithologic Description					
1	1.5/2	35.3	0 - 1,5	CON	(0 - 0.5) CONCRETE SLAB  (0.5 - 1.2) FILL, crushed black asphalt-like material and reddish granite, abundant feldspar and quartz, wet (may be from concrete corer), unconsolidated, granule to pebble sized.  (1.2 - 1.5) FILL, sand, brown, abundant Fe staining, moist, unconsolidated, moderate						

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

#### Log of Boring: 2013-STB-6 **Exide Technologies** DPT Completion Date: 3/14/2013 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 2 Dan Spaust Driller: Frisco, TX Driller's License: 3038 Total Depth (ft): Will Vienne, P.G. 7101799.4733 Field Supervisor: Northing: 2480030.8108 Logged By: Will Vienne, P.G. Easting: PBW Project No. 1755 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) PID (mdd) Depth Sample Lithologic USCS Interval Description (ft) (0 - 0.5) CONCRETE SLAB 0 CON (0.5 - 0.8) FILL, crushed black asphalt-like material, reddish granite, granule to pebble sized, moist, unconsolidated. (0.8 - 1.1) FILL, sand, heavy black stain at 0.8-1', moist, unconsolidated, very fine to fine 0.6/1.1 50.1 0.5 - 1.1 **F**ILL 1 grained, moderate sorting, refusal at 1.1'.

### **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exi	de Te	chnol	ogies		Log of Boring: 2013-STB-7					
	<del></del>	***************************************	<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	····	Completion Date:		3/14/2013	Drilling Method:	DPT		
	Frisco Recycling Center Frisco, TX						Dan Spaust	Borehole Diameter (	in.): 2		
						icense:	3038	Total Depth (ft):	1.2		
<b></b>					Field Supervisor:		Will Vienne, P.G.	Northing:	7101819.0361		
	PBW F	roiect N	lo. 1755		Logged By:		Will Vienne, P.G.	Easting:	2480034.4435		
					Sampling Method: 4' Lined Tube Ground Elev.			Ground Elev. (ft AM	SL):		
Depth (ft)	Recovery (fl/fl)	(mdd)	Sample Interval		Lithologic Description						
0				CON	(0 - 0.5) C	CONCRET	E SLAB				
0.7/1.2 1	0.7/1.2	7/1.2 32.6	0.5 - 1.2	FILC		(0.5 - 1.2) FILL, crushed black asphalt-like material and reddish granite, granule to pebble sized, wet (may be from concrete corer), refusal at 1.2'.					

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

Borehole plugged with bentonite chips and concrete repaired upon completion,

	Exic	de Te	chnol	ogies		l	Log of Bori	ng: 2013-STB	-8	
Frisco Recycling Center Driller:						on Date:	3/14/2013 Drilling Method: Dan Spaust Borehole Diameter (in.):		DPT 2	
Frisco, TX					Driller's L	icense:	3038	Total Depth (ft):	1.3	
	Field						Will Vienne, P.G.	Northing:	7101852.704	
PBW Project No. 1755						Зу:	Will Vienne, P.G.	Easting:	2479989.8386	
	, 5,,,,	.0,000.11			Sampling	Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL):				
Depth (ft)	Recovery (fl/ft)	Old (mdd)	Sample Interval	USCS	Lithologic Description					
0	0.5/1.3	60.7		CON	(0 - 0.8) CONCRETE SLAB					
1			0.5 - 1.3	FILL	(0.8 - 1.2) FILL, black asphalt-like material and reddish granite, granule to pebble sized, wet (may be from concrete corer), unconsolidated.					
(1.2 - 1.3) FILL, sand, brown with Fe staining, very fine to fine grained, medium sort wet (may be from concrete corer), refusal at 1.3'.								edium sorting.		

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Borehole plugged with bentonite chips and concrete repaired upon completion,

#### Log of Boring: 2013-STB-9 **Exide Technologies** Completion Date: 5/7/2013 Drilling Method: DPT Frisco Recycling Center Driller: Margarito Estrada Borehole Diameter (in.): 2 Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Field Supervisor: Northing: 7101812.453 Roberta Russell Logged By: PBW Project No. 1755 Easting: 2479995.8612 Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ff) Depth PID (ppm) Sample Lithologic USCS (ft) Interval Description 0 (0 - 0.5) CONCRETE SLAB CON (0.5 - 1.6) FILL, clayey sand, orange, trace black staining, moist, soft. 0.5 - 1 1 0.2 FILL (1.6 - 5.5) Silty CLAY, dark brown, moist, hard, medium plasticity. 2 2/5 3 4 5 5 - 5.5 (5.5 - 5.7) Gravelly, sandy CLAY, ~30% fine gravel and sand in clay matrix, wet, dark brown with orange Fe staining, wet, soft. (5.7 - 8.0) Silty CLAY, dark brown, wet, firm to hard, medium plasticity. 6 3/3 7 8

### **PBW**

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Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exi	de Te	chnol	ogies		Log of Boring: 2013-STB-10							
	Frisco	Recycli	ng Cente	Г	Completion Date:		3/14/2013 Dan Spaust	Drilling Method: Borehole Diameter (	DPT				
Frisco, TX					Driller's Licens	se:	3038	Total Depth (ft):	1.1				
					Field Supervis	or:	Will Vienne, P.G.	Northing:	7101831.6381				
	PBW F	Proiect N	No. 1755		Logged By:		Will Vienne, P.G.	Easting:	2479971.7708				
		. 0,000			Sampling Method: 4'		4' Lined Tube	Ground Elev. (ft AMSL):					
Depth (ft)	Recovery (ft/ft)	Old (mdd)	Sample Interval	USCS		Lithologic Description							
0 .	0.4/1.1	0.4	0.5 - 1.1	CON FILL	(0 - 0.5) CONCRETE SLAB  (0.5 - 0.6) FILL, crushed black asphalt-like material and red granite, granule to pebble sized, wet (may be from concrete corer), unconsolidated.								
'	Sauce control of the			terior de la composition de la composition de la composition de la composition de la composition de la composi		(0.6 - 1.1) FILL, sand, brown, heavy Fe staining, very line to line grained, moderate sorting, wet (may be from concrete corer), unconsolidated.							

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exide Technologies						Log of Bori	ng: 2013-STB	-11		
			-		Completion Date:		3/14/2013	Drilling Method:	DPT		
	Frisco Recycling Center Frisco, TX						Dan Spaust	Borehole Diameter (in.)	): 2		
						se:	3038	Total Depth (ft):	1.4		
<b>—</b>		**************************************	·····	***************************************	Field Supervisor:		Will Vienne, P.G.	Northing:	7101768.0406		
	PBW F	No. 1755		Logged By:		Will Vienne, P.G.	Easting:	2480094.6771			
					Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): ~				):		
Depth (ft)	Recovery (ff/ft)	GIA (mdd)	Sample Interval	uscs		Lithologic Description					
0	line in			CON	(0 - 0.5) CONC	CRET	E SLAB				
1	0.9/1.4	67.8	0.5 - 1.4	FILL	(0.5 - 1.1) FILL, black asphalt-like material and reddish granite, granule to pebble siz wet (may be from concrete corer).  (1.1 - 1.4) FILL, sand, brown with Fe staining, very line to fine grained, moderate sor						
1	3		***************************************	- 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 194	wet (may be fr	om co	oncrete corer), refusal a	t 1.4',			

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Borehole plugged with bentonite chips and concrete repaired upon completion.

	Exi	de Te	chnol	ogies		I	Log of Bori	ng: 2013-STB	-12	
			0 1 -		Completio	n Date:	3/14/2013	Drilling Method:	DPT	
Frisco Recycling Center					Driller:		Daп Spaust	Borehole Diameter (in.):	2	
	Frisco, TX					ense:	3038	Total Depth (ft):	1.2	
<b></b>	······································	***************************************			Field Supervisor:		Will Vienne, P.G.	Northing:	7101780,8028	
	PBW F	Project N	No. 1755		Logged By:		Will Vienne, P.G.	Easting:	2480016.3817	
	,	,			Sampling Method: 4' Lir		4' Lined Tube	Ground Elev. (ft AMSL):		
Depth (ft)	Recovery (#/ft)	OIA (mdd)	Sample Interval	USCS	Lithologic Description					
0				CON	(0 - 0.5) C	ONCRET	E SLAB			
1	0.7/1.2	46.6	0.5 - 1.2	FILL	concrete c (0.9 - 1.2)	(0.5 - 0.9) FILL, crushed black asphalt-like material and red granite, moist (may be from concrete corer), unconsolidated. (0.9 - 1.2) FILL, sand, brown with heavy Fe staining, very fine to fine grained, moderate sorting, wet (may be from concrete corer), unconsolidated.				

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion,

#### Log of Boring: 2013-TS-1 **Exide Technologies** 3/14/2013 Drilling Method; DPT Completion Date: Frisco Recycling Center Borehole Diameter (in.): 2 Driller: Dan Spaust Frisco, TX Driller's License: 3038 Total Depth (ft): Will Vienne, P.G. Field Supervisor: Northing: 7102097.0348 Will Vienne, P.G. 2480985.384 Easting: PBW Project No. 1755 Logged By: Sampling Method: 4' Lined Tube Ground Elev. (ft AMSL): --Recovery (fl/fl) Lithologic Depth Sample USCS Interval Description (ft) (0 - 4.0) Silty CLAY, very dark brown gray, weathered, dry, slightly firm to firm, low plasticity clay, root fragments at 0-0.3', trace limestone granules in moderately organic clay at 0-2.2', abundant ō 0 - 0.5 limestone granules below 2.2'. 1 0.5 - 2 2 4/4 3 2 - 4

### **PBW**

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Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.

	Exi	de Te	chnol	ogies		1	Log of Bor	ing: 2013-TS-2	1
<u> </u>					Completi	on Date:	3/14/2013	Drilling Method:	DPT
	Frisco	Recyclin		r	Driller:		Dan Spaust	Borehole Diameter (in.)	2
		Frisco, T	Х		Driller's L	lcense:	3038	Total Depth (ft):	4
				,	Field Sup	ervisor:	Will Vienne, P.G.	Northing:	7102252.6153
	PBW F	Project N	o. 1755		Logged E	Зу:	Will Vienne, P.G.	Easting:	2480976.5784
		. 2,2 - 2 1 1			Sampling	Method:	4' Lined Tube	Ground Elev. (ft AMSL)	· ·
Depth (ft)	Recovery (fl/ft)	Sample Interval	uscs				Litholo Descrip	tion	
0		0 - 0.5		(0 - 4.0)	Silty CLA	Y, dark bro	wnish gray, dry, slightl	y firm to firm, low plasticity clay	, trace root
1		0.5 - 2		tragmen below 2.	is from 0-0 3' with abo	undant lim	estone granules in i	moderately organic clay at 0-2.3	s, gray brown
2	4/4		el.						
3		2 - 4			Shahari da a sa sa sa sa sa sa sa sa sa sa sa sa				

# **PBW**

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Borehole plugged with bentonite chips upon completion.

This boring log should not be used seperately from the report to which it is attached.



### LOG OF 2014-TS-3

DRILLING METHOD: Direct Push

NORTHING: 7,102,166 FT

DATE/TIME: 03/31/2014, 1415

DRILLER: SCI, Margarito Estrada

EASTING: 2,480,979 FT

TOTAL DEPTH: 5 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: 650 FT AMSL

		311663			Geopiul		SURFACE ELEVATION: 630 FT ANISL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
				0.0-0.5 (1424) 0.5-2.0 (1425)	СН		0.0-2.25 FT, (CH) CLAY, trace fine gravel; black; dry, stiff.
	1	N/A	<u>4.8</u> 5.0	2.0-4.0 (1426)	СН		2.25-4.0 FT, (CH) CLAY, trace silt, trace fine gravel; dark gray; dry, hard.
							4.0-5.0 FT, Not Logged.
-5							End of borehole at 5 FT BGS
- - 10							
-						The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
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						TOTAL CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPER	

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	East of Oxide Bldg	REVIEWED BY:	JW

#### Log of Boring: VCP-MW-1 **Exide Technologies** Completion Date: 2/28/2013 Drilling Method: **HSA** Frisco Recycling Center Borehole Diameter (in.): 7.75 Drilling Company: Strata Core Services, LLC Frisco, TX Driller: Chris Combs Total Depth (ft): 7101501.9575 Driller's License: 56033 Northing: 2479866.9837 Tim Jennings, P.G. Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL); 652.99 Field Supervisor: Tim Jennings, P.G. Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 655.88 Well Depth Recovery PID Lithologic uscs (ppm) (ft) Materials (ft/ft) Description (0 - 3.6) Clayey SILT, grayish brown, moist to wet, soft to firm, high plasticity. 0 0.9 1,2 MH. 1,2 5.0/5.0 0.7 (3.6 - 7.5) SHALE, light brown, orange and gray, moist, firm to hard, medium plasticity, weathered. 0.5 5 1.3 1.1 SH 5,0/5.0 1.3 (7.5 - 10.0) SHALE, dark gray, dry, hard. 0,9 0,8 10

## **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes

This boring log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 1.0) Concrete (1.0 - 2.0) Bentonite Hole Plug (2.0 - 10.0) 20/40 Silica Sand Well Materials (+2.89 - 2.5) Casing, 2" Sch 40 FJT PVC (2.5 - 10.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-2 **Exide Technologies** Completion Date: 3/1/2013 Drilling Method: Frisco Recycling Center Drilling Company: Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Driller: Chris Combs Total Depth (ft): 56033 7101872.3093 Driller's License: Northing: 2479265.8773 Tim Jennings, P.G. Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 627.74 Tim Jennings, P.G. Field Supervisor: Sampling Method: TOC Elev. (ft AMSL): 631.16 5' Split Spoon Depth Well Recovery Lithologic USCS (ft) (ft/ft) (ppm) Materials Description (0 - 4.0) Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, 6.2 abundant roots to 4'. 7.0 MH 5,0/5.0 9.3 8.7 (4.0 - 9.0) Silty CLAY, dark grayish brown, moist soft, medium plasticity, rust colored 7.2 mottling locally, friable, abundant roots, iron oxide mottling below 6', 5 8.8 7.2 5,0/5.0 8.1 (9.0 - 11.1) Silty CLAY, dark grayish brown, moist firm, medium to high plasticity, 9.3 light gray laminae. 10 CLICH 8.5 (11.1 - 13.6) Gravelly CLAY, light brown and orange, moist to wet, firm, high 7.0 plasticity clay, ~20-30% fine to medium gravel in clay matrix, increasing moisture with depth. 5.0/5.0 6.6 (13.6 - 15.6) Sifty CLAY, light brown to orange, wet, soft, high plasticity. <5% fine to coarse sand. 7.2 15 8.1 (15.6 - 18.2) SHALE, gray to light brown, moist, hard, abundant iron oxide along bedding planes, weathered. 5.4 5.2 3.5/5.0 SH (18.2 - 20.0) SHALE, dark gray, dry, hard. 12.0 25,1 20

## **PBW**

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This boring log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 20.0) 20/40 Silica Sand Well Materials (+3.42 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-3 **Exide Technologies** 2/28/2013 Drilling Method: Completion Date: Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 Drilling Company: Frisco, TX Driller: Chris Combs Total Depth (ft): Northing: 7102743.5737 56033 Driller's License: Tim Jennings, P.G. 2478984.5144 Easting: Logged By: PBW Project No. 1755 Tim Jennings, P.G. Ground Elev. (ft AMSL): 631.34 Field Supervisor: TOC Elev. (ft AMSL): 634.06 Sampling Method: 5' Split Spoon Depth Well Recovery Lithologic USCS (ppm) Materials (ft/ft) (ft) Description (0 - 3.4) Silty CLAY/Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, abundant roots at 0-0.5'. 0..8 0.1 CHMH 4,3/5,0 0.3 (3.4 - 7.3) Silly gravelly CLAY; light brown, moist, firm to hard, medium plasticity clay, ~10-30% fine calcareous gravel. 1.1 5 0,6 0.6 0.1 (7.3 - 7.6) Silty CLAY, light brown, moist firm to hard, medium plasticity, orange and 2.4/5.0 green laminated. (7.6 - 10.0) No Recovery NR 10 (10.0 - 13.0) Silty CLAY, light brown, wet, soft, high plasticity. 0.4 0.5 5.0/5.0 0.4 (13.0 - 15.0) SHALE, gray, moist, firm to hard, medium plasticity, abundant iron 1.1 oxide partings, weathered. 0.4 15

## **PBW**

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This boring log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand Weil Materials (+2.72 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

	Exide	Techn	ologi	es		Log of Borii	ng: VCP-MV	<b>V-4</b>
•	Frisco Rec	vcling Ce	enter		Completion Date: Drilling Company:	2/28/2013 Strata Core Services, LLC	Drilling Method: Borehole Diameter (in.):	HSA 7.75
		co, TX		ł	Driller:	Chris Combs	Total Depth (ft):	15
	***************************************				Driller's License:	56033	Northing:	7102521.1042
				l	Logged By:	Tim Jennings, P.G.	Easting:	2479285.0237
	PBW Proje	ct No. 17	'55		Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	632.18
					Sampling Method:	5' Split Spoon	TOC Elev. (ft AMSL):	635.43
epth (ft)	Well Materials	Recovery (ft/ft)	USCS	PIC (ppn		Litholo Descri		
0				0		y SILT, dark grayish brown, r		trace calcareou
	1311			0				1440
v.		2.5/5.0		0,4	(1.8 - 5.3) Silty plasticity, trace	CLAY, brown to light brown, e to 5% calcareous nodules.	maist, soft to firm, medit	um to high
or.			CLICH	•	500 * * * * * * * * * * * * * * * * * *			
5				*	***************************************			
		**************************************	cuec,	0.1	(5.3 - 6.6) Gra medium plasti	velly CLAY/Clayey GRAVEL, city clay, ~40-60% fine to me	sub-rounded gravel, mo dium gravel in clay matrix	ist, soft to firm, c.
2				0		ity CLAY, orange, brown and		
-		3,0/5,0		0.1	plasticity.			
			CUCH	•	***************************************			
10								
				1	(10.7 - 15.0) S	SHALE, orangish brown to gra	ay, moist to dry, firm to ha	rd, medium
				0	plasticity, abu	ndant iron oxide along beddir	ng planes.	
		5.0/5.0	SH	0.1	rinagerine (			
			grande errord trans	0.3	3			
	1.1		glapas distribution	0.1				

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This boring log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 1.0) Concrete (1.0 - 3.0) Bentonite Hote Plug (3.0 - 15.0) 20/40 Silica Sand Well Materials (+3.25 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-5 **Exide Technologies** Completion Date: 2/27/2013 Drilling Method: **HSA** Frisco Recycling Center Borehole Diameter (in.): 7.75 Strata Core Services, LLC Drilling Company: Frisco, TX Chris Combs Driller: Total Depth (ft): 20 Northing: 7102925.8587 Driller's License: 56033 Tim Jennings, P.G. 2480000.584 Easting: Logged By: PBW Project No. 1755 Tim Jennings, P.G. Ground Elev. (ft AMSL): 640.8 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 643.97 Well Depth Recovery Lithologic USCS (ft) Materials Description (0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, firm to hard, high plasticity, few (<5%) Ô small calcareous nodules below 3.3', dry below 3.5'. 5.0/5.0 CH 5 (6.6 - 11.5) Sandy, silty CLAY; light brown, light gray and orange laminated, moist, very hard, 2.5/5.0 medium to high plasticity, ~10-20% fine to coarse sand in clay matrix. CLICH 10 (11.5 - 12.0) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay. (12.0 - 12.8) Clayey, gravelly SAND; wet, soft, ~20-30% clay, ~10-20% fine to medium gravel. (12.8 - 15.9) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay, ~10-20% CH SW 3,2/5,0 fine sand and fine gravel, possibly calcareous nodules. CH 15 (15.9 - 17.5) CLAY, orange and gray mottled, moist, firm, medium plasticity, <5% fine to medium gravel and calcareous nodules, possible reworked shale. 2.5/5.0 (17.5 - 17.7) SHALE, gray, moist, firm, high plasticity. (17.7 - 20.0) SHALE, gray, very hard, poor recovery.

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This log should not to be used separately from the report to which it is attached.

Annular Materials (0.0 - 1.0) Concrete (1.0 - 3.0) Bentonite Hole Plug (3.0 - 20.0) 20/40 Silica Sand

Well Materials

(+3.17 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-6 **Exide Technologies** HSA Completion Date: 2/27/2013 Drilling Method: Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 Drilling Company: Frisco, TX Driller: Chris Combs Total Depth (ft): 56033 Northing: 7103251,5523 Driller's License: 2479837.0804 Logged By: Tim Jennings, P.G. Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 641.1 Field Supervisor: Tim Jennings, P.G. Sampling Method: TOC Elev. (ft AMSL): 644.71 5' Split Spoon Depth Well Lithologic Recovery USCS Materials (ft/ft) Description (ft) (0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, soft to hard, high plasticity, <5% calcareous nodules, hard and dry below 3.7', brown, ~5-10% calcareous nodules at 5-6.6', very 0 stiff 6-6.6'. 5,0/5,0 CH 5 (6.6 - 10.0) Silty, gravelly CLAY; brown orange, moist, hard to very hard, medium to high 3,7/5,0 plasticity clay, well laminated, ~10-20% fine to medium gravel and calcareous nodules. CLICH 10 (10.0 - 15.0) Clayey SILT, moist to wet, soft, high plasticity, ~20-30% fine to medium gravel and fine to coarse sand from 12.3-12.8', wet below 12.3'. 3.7/5.0 MH. 15 (15.0 - 16.5) Silty, gravelly SAND; brown, wet, soft, ~10% fines, ~20-30% fine to medium SM/SW sub-rounded gravel in fine to coarse sand. CĤ (16.5 - 17.1) Silly CLAY, brown, wet, soft, high plasticity, trace fine gravel in clay matrix. 5.0/5.0 (17.1 - 20.0) SHALE, gray and brown, moist, firm to hard, iron oxide staining along bedding planes, weathered. SH 20

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Annular Materials (0.0 - 1.0) Concrete (1.0 - 3.0) Bentonite Hole Plug (3.0 - 20.0) 20/40 Silica Sand

Well Materials (+3.61 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-7 **Exide Technologies** Completion Date: 4/18/2013 Drilling Method: **HSA** Frisco Recycling Center Drilling Company: Sunbelt Environmental Borehole Diameter (in.): 8.25 Frisco, TX Driller: Joe Garcia Total Depth (ft): 58780 7100967.0459 Driller's License: Northing: Easting: 2481078.6125 Carolyn Sexton Logged By: PBW Project No. 1755 Tim Jennings, P.G. Ground Elev. (ft AMSL): 683.116976 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 685.176513 Depth Well (EVIE) Lithologic PID USCS (ft) Materials (ppm) Description 0 (0 - 0.8) Silty CLAY, dark gray brown, moist, soft, low plasticity, trace med. size CL ٥ gravel in top 0.5', gradational contact. (0.8 - 1.1) Chalky, silty LIMESTONE, weathered, orange iron oxide staining, (1.1 - 6.2) Chalky, silty LIMESTONE, light tan, brittle, dry, hard, <5% dark brown and 0 4,0/4.0 orange ironstone nodules from 4.0-4.2'. 0 ٥ LS 0 5 (6.2 - 10) Chalky, silty SHALE, dark gray, fissile, blocky at base, dry, hard. 0 5.0/5.0 0 SH 0 1.0/1.0

## **PBW**

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Annular Materials (0.0 - 1.0) Concrete (1.0 - 2.0) Bentonite Hole Plug (2.0 - 10.0) Industrial Quartz Sand Weil Materials (+2 06 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 10.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-8 **Exide Technologies** Completion Date: 4/17/2013 Drilling Method: HSA Frisco Recycling Center Drilling Company: Borehole Diameter (in.): 8.25 Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 16 58781 Driller's License: Northing: 7102884.3737 Carolyn Sexton Logged By: Easting: 2481077.5726 PBW Project No. 1755 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL): 648.101225 Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 651.023133 Depth Well Lithologic PID 1 uscs (ft) Materials (ppm) Description (0 - 3.6) FILL, gray brown, dry, with silly clay, coarse sand to large gravel, asphalt-like nodules, calcareous nodules. 0 0 3.0/5,0 0 0 (3.6 - 7.4) Silly CLAY, dark brown, moist, low plasticity, -10% graded angular fine to med, sand and calcareous nodules. 0 5 0 0 2,5/5,0 0 (7.4 - 11.1) Silty CLAY, medium-brown to gray, moist to wet, low to med. plasticity, ~10-20% coarse sand to medium gravel. 0 0 10 0 (11.1 - 15.9) Slightly silty CLAY, gray brown, moist to wet, low to med. plasticity, 0 ~30-40% gravel from 11.1-11.3'. 3,2/5,0 0 0 0 15 1.0/1.0 0 (15.9 - 16) LIMESTONE, grayish tan, competent, microcrystaline to very fine grained, contains veins of secondary crystals.

## **PBW**

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 16.0) Industrial Quartz Sand Well Materials

(+2.92 - 6.0) Casing, 2" Sch 40 PVC (6.0 - 16.0) Screen, 2" Sch 40 PVC, 0.010 slot

### Log of Boring: VCP-MW-9 **Exide Technologies** Completion Date: 4/17/2013 Drilling Method: **HSA** Frisco Recycling Center **Drilling Company:** Sunbelt Environmental Borehole Diameter (in.) 8.25 Frisco, TX Joe Garcia Total Depth (ft): Driller: 58782 Northing: 7103297.5194 Driller's License: 2481042.4147 Carolyn Sexton Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 664.314339 Field Supervisor: Tim Jennings, P.G. Sampling Method: TOC Elev. (ft AMSL): 666.957891 5' Split Spoon Lithologic Depth Well 1 USCS Description (ft) Materials (ppm) (0 - 0.7) Silty CLAY, dark brown, slighly moist, firm, low plasticity, with root fragments 0 and angular coarse sand to med, gravel. (0.7 - 2.7) Silty CLAY, dark brown to black, slightly moist, firm to hard, low plasticity, with calcareous nodules and 10-20% angular coarse sand to fine gravel. 0 4.0/5.0 0 (2.7 - 5) Clayey GRAVEL, yellow-brown, moist to wet, firm, low plasticity, ~40-50% 0 fine to med. carbonate gravel in clay matrix. ĠĊ 0 5 (5 - 6.1) Silty CLAY, gray with orange iron oxide staining, moist, soft to firm, low to 0 medium plasticity, calcareous nodule lense from 5.5-5.6', laminated fine sand from 5.9-6.05 0 (6.1 - 18.8) Silty CLAY, gray with orange iron oxide staining, moist, firm, low plasticity, moderately weathered throughout, contains horizontal carbonate and inron oxide staining and vertical iron oxide filled fractures. 5.0/5.0 0 0 10 0 0 5.0/5.0 0 0 15 0 0 5.0/5.0 0 0 (18.8 - 20) SHALE, dark gray, moist, firm, low plasticity, unweathered. SH 0

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Annular Materials (0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 20.0) Industrial Quartz Sand Well Materials (+2.64 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 20.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-10 **Exide Technologies** Completion Date: 4/17/2013 Drilling Method: **HSA** Frisco Recycling Center Drilling Company: Sunbelt Environmental Borehole Diameter (in.): 8.25 Frisco, TX Driller: Joe Garcia Total Depth (ft): 15 Driller's License: 58783 Northing: 7103274.8564 2481265.9907 Logged By: Carolyn Sexton Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 667.108585 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 669.744622 Depth Well Lithologic PID € uscs (ft) Materials Description (ppm) (0 - 0.4) Silly CLAY, dark brown, with roots and 5-10% fine gravel and calcareous ō nodules. (0.4 - 1.2) Sandy CLAY, light gray, interlayered soft clay and iron oxide stained sand, 0 slightly moist, low to medium plasticity. (1.2 - 5.6) Silty CLAY, dark brown-gray, moist, low to medium plasticity, carbonate 5.0/5.0 0 coarse sand to fine gravel within clay matrix throughout, coarse gravel from 1.6-2.8'. 0 0 5 0 (5.6 - 12.4) Silty CLAY, light to medium gray, moist, soft, friable and fissile, massive CL below 7.7', limonite and orange iron oxide staining throughout. 0 5.0/5.0 0 0 10 0 0 5.0/5.0 0 (12.4 - 15) SHALE, dark gray, slightly moist, low plasticity, slightly weathered. 0

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Annular Materials (0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 15.0) Industrial Quartz Sand Well Materials (+2.64 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-11 **Exide Technologies** Completion Date: 4/17/2013 Drilling Method: **HSA** Frisco Recycling Center Borehole Diameter (in.): 8.25 Drilling Company: Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 15 58784 7103365.2704 Driller's License: Northing: 2481418.2146 Carolyn Sexton Logged By: Easting: PBW Project No. 1755 Tim Jennings, P.G. Ground Elev. (ft AMSL): 670.152153 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 672.734085 Well Lithologic Depth 1 USCS (ft) Materials (ppm) Description 0 (0 - 0.8) Silly CLAY, deep brown, slightly moist, low plasticity, soft to firm, contains 0 roots. (0.8 - 5) Slightly silly CLAY, yellow-gray, slightly dry, firm to hard, low plasticity, 10-30% coarse sand to fine gravel dispersed within clay matrix, roots to 3.2', 0 calcareous laminae and iron oxide staining throughout. 3,6/5,0 0 0 0 5 (5 - 10) Weathered SHALE, gray, slightly dry, firm to hard, low plasticity, iron oxide 0 staining and carbonate filled laminae throughout. 0 3.4/5,0 0 0 0 10 (10 - 12.8) SHALE, dark gray, friable, iron oxide staining, weathered. 0 0 5,0/5,0 SH (12.8 - 15) SHALE, dark gray, dry, very hard, fissile, unweathered. 0 0

15

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Annular Materials

(0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 15.0) Industrial Quartz Sand

Well Materials (+2.58 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

### Log of Boring: VCP-MW-12 **Exide Technologies** Completion Date: 12/12/2013 Drilling Method: **HSA Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 8 Frisco, TX Driller: Robert Flair Total Depth (ft): 30 2948 7103109 Driller's License: Northing: Tim Jennings P.G. 2481224.6 Logged By: Easting: PBW Project No. 1824 652.88 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL) Sampling Method: 5' Continuous Samples TOC Elev. (ft AMSL): 656.04 Depth Well Lithologic PID (fff) **USCS** Description (ft) Materials (ppm) (0 - 1.5) Sandy gravelly CLAY, dark brown, moist, soft, ~20% fine to coarse 0 0 limestone gravel (1.5 - 9.5) Gravelly CLAY, dark brown, moist, very firm-stiff, ~10-15% very fine to 2 fine gravel and carbonate nodules 3.0/5.0 0.5 0.5 CL 0.5 6 0.5 2.2/5.0 8 (9.5 - 13) CLAY, olive gray, moist, firm, medium to high plasticity, few fine carbonate 10 nodules 0.5 CL/CH 0.5 12 5.5/5.5 1.1 (13 - 25.5) SHALE, gray and orange banded, moist, friable, locally very clayey, 1.5 weathered 14 1.6 2.2 16 2.2 5.0/5.0 2.2 18 2.2 2.2 20 2.2 2.2 22 4.0/5.0 1.6 1.6 24 3.8 1.1 (25.5 - 27) SHALE, gray, moist to dry, locally friable, locally sandy, weathered 26 2.0/2.5 1.1 (27 - 30) SHALE, gray, dry, firm, friable, fissile 1.6 28 2.2 2.5/2.5 2.2 30

## **PBW**

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### Notes

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 8.0) Bentonite Hole Plug (8.0 - 30.0) Industrial Quartz Sand Well Materials

(+3.2 - 9.5) Casing, 2" Sch 40 PVC (9.5 - 29.5) Screen, 2" Sch 40 PVC,

### Log of Boring: VCP-MW-13 **Exide Technologies** Completion Date: 1/3/2014 **HSA Drilling Method:** Undeveloped Buffer Property **Drilling Company:** Borehole Diameter (in.): 8 Sunbelt Environmental Frisco, TX Driller: Robert Flair Total Depth (ft): 24 Driller's License: 2948 Northing: 7103094 Tim Jennings, P.G. Logged By: Easting: 2481043.9 PBW Project No. 1824 Tim Jennings, P.G. 645.9 Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 3"x5' Continuous Split Barrel TOC Elev. (ft AMSL): 657.38 Recovery (#/ft) Depth Well Lithologic PID **USCS** (ft) Materials Description (ppm) CLAY, gravel and sand, brown, moist, soft (fill). 0 2 Sandy gravelly CLAY, dark brown, moist, ~10-15% very fine sand and fine carbonate nodules, very stiff. 4 CLAY and sandy clay, light brown-orange-gray, moist to wet, very firm to firm, laminated, abundant carbonate nodules from 5-10', gypsum precipitate on bedding 6 plane at 11', increasing moisture below 10' and locally wet below 15', very heavily weathered shale. 8 СŁ 10 12 14 16 18 SHALE, weathered, dark gray with orange weathering locally, thin gravel interbeds locally, moist to wet, soft to firm, friable. 20 SH 22

## **PRW**

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### Notes

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 3.0) Bentonite Hole Plug (3.0 - 24.0) 16/30 Silica Sand

### Well Materials

(+3.2 - 4.0) Casing, 2" Sch 40 FJT PVC (4.0 - 24.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

#### Log of Boring: 2013-WMU6-1 **Exide Technologies** Completion Date: 5/7/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Total Depth (ft): Driller's License: 58164 Tim Jennings, P.G. Northing: 7101955,0582 Field Supervisor: PBW Project No. 1755 Logged By: Roberta Russell Easting: 2479994.3068 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Lithologic Sample USCS Description Interval (ft) 0 (0 - 0.9) CONCRETE SLAB CON (0.9 - 2.7) FILL, clayey silt/silty clay, dark brown with orange and black staining, moist, soft to firm, low plasticity. 0.9 - 2 FILL 2 5/5 (2.7 - 5.0) Silty CLAY, dark brown, trace calcareous precipitates, moist, firm, low to medium 3 2 - 4 plasticity. 4 - 5

## $\mathbf{PBW}$

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Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached.

### Log of Boring: 2013-WMU14-1 **Exide Technologies** 5/7/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. Field Supervisor: Northing: 7101992.1222 Roberta Russell Logged By: 2479881.2748 PBW Project No. 1755 Easting: Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth Sample Lithologic uscs (ft) Interval Description ō (0 - 0.9) CONCRETE SLAB CON 1 (0.9 - 5.0) FILL, silty clay/clayey silt, dark reddish brown with trace orange and black staining, trace battery chips and slag fragments (<0.5" diameter) from 0.9-3.0', moist, soft to firm, low plasticity. 0.9 - 22 4.1/5 3 2-4

## $\mathbf{PBW}$

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Borehole plugged with bentonite chips and concrete repaired upon completion.

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### LOG OF 2013-WMU14-1A

DRILLING METHOD: Direct Push

NORTHING: 7,101,992 FT

DATE/TIME: 01/09/2014, 1445

DRILLER: SCI, Margarito Estrada

EASTING: 2,479,883 FT

TOTAL DEPTH: 10 FT BGS

RIG: Geoprobe

SURFACE ELEVATION: N/A

		7					
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
						0 0 0 0	0-0.5 FT, Concrete.
					ML	M	0.5-1.0 FT, (ML) CLAYEY SILT, some sand and gravel; gray; wet, firm.
- 1				0.9-2.0	СН		1.0-2.0 FT, (CH) CLAY; dark gray; moist, soft. 1.3-1.75 FT, black staining.
	1	7	<u>5.0</u> 5.0	(1440)	CL		2.0-3.5 FT, (CL) CLAY, trace gravel; light gray; moist, stiff.
-		11111					3.5-10.0 FT, (CH) CLAY; black; dry, soft-firm.
-5		NA		-			
-				5.0-7.0 (1444)	СН		
-	2	1000	<u>5.0</u> 5.0				
-							
- 10							
							End of borehole at 10 FT BGS
-							
- 15							
				700			
,							
				1			
	···						

PROJECT No:	130-2086	COMPILED BY:	BEF
PROJECT:	Exide Frisco	CHECKED BY:	JDJ
LOCATION:	NOR WMU 6, 14, 16	REVIEWED BY:	JW

	Exi	de Te	chnol	ogies		Log of Borin	ng: 2013-WN	/IU14-2
				***************************************	Completion Date:	5/7/2013	Drilling Method:	DPT
			ng Cente	г	Driller:	Margarito Estrada	Borehole Diameter (	in.): 2
		Frisco,	TX		Driller's License:	58164	Total Depth (ft):	5
**************************************	***************************************		***************************************	***************************************	Field Supervisor:	Tim Jennings, P.G.	Northing:	7101826.2342
	PBW F	²roiect N	No. 1755		Logged By:	Roberta Russell	Easting:	2480109.0334
	•	,			Sampling Method:	5' Lined Tube	Ground Elev. (ft AMS	SL):
Depth (ft)	Recovery (ft/ft)	Old (mdd)	Sample Interval				ologic cription	
0				CON	(0 - 0.9) CONCRET	TE SLAB		
1	10000	1.1	0.9 - 2		(0.9 - 1.5) FILL, sar	ndy clay, moist, firm, low p	plasticity.	
2			0.3-2		(1.5 - 5.0) FILL, silty hydrocarbon odor.	y clay/clayey silt, dark bro	own, moist, soft to firm, lov	v plasticity, trace
3	4.1/5	0.8	2 - 4	FILL				
4		11.8	4-5					

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### Notes:

Borehole plugged with bentonite chips and concrete repaired upon completion.

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#### Log of Boring: 2013-WMU14-3 **Exide Technologies** Completion Date: 5/7/2013 Drilling Method: DPT Frisco Recycling Center Margarito Estrada Borehole Diameter (in.): 2 Driller: Frisco, TX 58164 Driller's License: Total Depth (ft): Tim Jennings, P.G. 7102020.6551 Northing: Field Supervisor: Logged By: Roberta Russell Easting: 2480630.7817 PBW Project No. 1755 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ff/ft) Lithologic Depth Sample USCS Description (ft) Interva 0 (0 - 0.9) CONCRETE SLAB CON 1 (0.9 - 4.6) FILL, silty clay/clayey silt, grayish brown with orange Fe staining, moist, firm, low 0.9 - 22 4.1/5 3 2 - 4 4 (4.6 - 5.0) Clayey GRAVEL, ~50-60% corase sand and fine -medium gravel in silty clay matrix, grayish brown with orange Fe staining, moist. 5

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Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached

#### Log of Boring: 2013-WMU16-1 **Exide Technologies** 5/7/2013 Drilling Method: DPT Completion Date: Frisco Recycling Center Frisco, TX Margarito Estrada Borehole Diameter (in.): 2 Driller: Driller's License: 58164 Total Depth (ft): Tim Jennings, P.G. 7101886.1348 Field Supervisor: Northing: PBW Project No. 1755 Logged By: Roberta Russell Easting: 2480414.841 Sampling Method: 5' Lined Tube Ground Elev. (ft AMSL): --Recovery (ft/ft) Depth (ft) Sample Lithologic uscs Interval Description 0 (0 - 0.9) CONCRETE SLAB CON 1 FILL (0.9 - 1.5) FILL, gravel (coarse pebbles), dry, unconsolidated. 0.9 - 2 (1.5 - 5.0) Silty CLAY, dark brown, moist, firm, low plasticity. 2 4.1/5 3 2 - 4 4 4 - 5 5

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Borehole plugged with bentonite chips and concrete repaired upon completion.

This boring log should not be used seperately from the report to which it is attached

Geotechnical Engineering Report (Rone, 2011)

Projec	t No	).		Boring No.	Tb. / L			······································			Ros	  a	nei.	******	
11	-10	599	6	B 1-10	Exide Technologies Frisco, Texas						. 201	e E		icel	1118
Locati	on				Water Observations Groundwater seepage	- mo-	at ak-		m.k.0.			•			
Comp Depth		n 10.		Completion Date 8-23-11	appeared dry at com	oletion.	iot GD:	eci vea	WILLIAM	2 O.M	ung,	and :	ine b	oreh	ole
			Sur	face Elevation	Туре СҒА		Ĭ.	#£			Π	Ī			
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Ciquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pof	Unconfined Compression psf
-				FAT CLAY with limester and sand	(CH) - very hard to hard, dark brown, one fragments and calcareous nodules		4,54		86	64	22	42	17		
						-	4,5+						19		
5-				- brown and g	ray, with calcareous nodules		4.5+						15		***************************************
-						-	4.5+		88	53	19	34	16		***************************************
						-	4.5+/2.5						18		·····
		THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O													
)G O	F B	OF	UN	g no. <b>B1-</b>	10			×, s					Pla	ite A	1.2

	ct No 1-1	a, 699	6	Boring No. B 1-25	Exide Technologies				*************	~ <del>~~~~</del>	Ror	ne E	ngl	neer	ing-
Locat					Frisco, Texas Water Observations				·····						
					Groundwater seepage	was c	bserv	ed at a	dept	h of	abou	t 18'	while	e	
Comp Depth		n <b>25</b> .		Completion Date 8-23-11	Granag.				-						
			Sur	face Elevation	Type CFA	T	T		Τ		Γ	T	1		
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Lmft, %	Plasticity Index	Moisture Content, %	Dry Unit Weight per	Uncomfined Compression
-				gray, with roots and to	CLAY (CH) - very hard, dark brown and limestone fragments, calcareous nodules, ash (pieces of glass, nails, plastic)		4.5+						14		***************************************
-	67.67						4.5+		87	65	22	43	20	106	2423
-			,	SANDY CL/ yellowish b	AY (CL) - very hard to hard, light rown, with calcarcous nodules		4.5+					-	16		<del></del>
-						-	2.5		64	49	17	32	17		
derenden				loves of sole			3,75	<del></del>					21		
0-	- layer of ca				arcous materiaj			·····						-	
						<u> </u>	4.5+						17		
				- dark brown,	with sand scams										
,				FAT CLAY (	CH) - dark gray										
1					Ā		NR								***************************************
				SHALEY CLA	AY - gray				$\dashv$			-			
, 1	1			Boring Termina	Sted at 25 East									-	
***************************************				worng resimile	nsu at 23 FEE(	***************************************									**************************************
										***************************************	*				
G O	FΒ	OR	N	3 NO. <b>B</b> 1-	25								Pla	te A	3

Location   Completion   Completion   Completion   Carpoint   Completion   Carpoint   C	Project No. 11-169	96	Boring No. <b>B 1-35</b>	Exide Technologies Frisco, Texas						Kor	ie E	ng:	neer	ing-
Completion 199,0' Date 8,23-11  Surface Elevation Type CFA  Stratum Description 50 Date 8,23-11  FAT CLAY (CH) - dark brown and gray, with limestone fragments, possible fill  FAT CLAY (CH) - wery hard to hard, light yellowish brown and gray, with calcarcous nodules  FAT CLAY (CH) - wery hard, gray 4.5+ 2.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 Date 1.5 D				Water Observations Groundwater seepage	was o	bserv	ed at a	dept	h of a	bou	t 18'	while	 B	***************************************
Stratum Description  Stratum Description  FAT CLAY (CH) - dark brown and gray, with limestone fragments, possible fill  FAT CLAY (CH) - very hard to hard, light yellowish brown and gray, with calcureous nodules  SHALEY CLAY (CH) - very hard gray  SHALEY CLAY (CH) - very hard, gray  4.5+  SHALEY CLAY (CH) - very hard, gray  4.5+  SHALEY CLAY (CH) - very hard, gray  4.5+  SHALEY CLAY (CH) - very hard, gray  4.5+  SHALEY CLAY (CH) - very hard, gray			Date 8-23-11	drilling.										
FAT CLAY (CH) - dark brown and gray, with limestone fragments, possible fill  FAT CLAY (CH) - very hard to hard, light yellowish brown and gray, with calcarrous nodules  3.25 99 70 25 45 28  SHALEY CLAY (CH) - very hard, gray  4.5+ 23		Su	rface Elevation	Type CFA			<b>4</b> 5							
FAT CLAY (CH) - very hard to hard, light yellowish brown and gray, with calcareous nodules  SHALEY CLAY (CH) - very hard, gray  SHALEY CLAY (CH) - very hard, gray  4.5+  23  4.5+  20	Depth, Ft. Symbol	Side		<u>-</u>	REC %	Penetrometer Reading, TSF	SPT - Blows/Foc TCP - Blows/Inc	Passing No. 200 Sieve, %	Uquid Cimit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pef	Unconfined
SHALEY CLAY (CH) - very hard, gray  4.5+  20  4.5+  20			FAT CLAY limestone f	(CH) - dark brown and gray, with ragments, possible fill			4.4-4.A.					9		
SHALEY CLAY (CH) - very hard, gray  4.5+  20  4.5+  20					-							ļ		
SHALEY CLAY (CH) - very hard, gray  4.5+  20  4.5+  20					-								-	
SHALEY CLAY (CH) - very hard, gray  4.5+  20  4.5+  20	3		FAT CLAY	(CH) - very hard to hard, light vellowish		4 S+	*************					0		
SHALEY CLAY (CH) - very hard, gray  4.5+  20  4.5+  20			brown and	gray, with calcareous nodules		33.47						8		
Σ 4.5+ 20						3,25		99	70	25	45	28		
15————————————————————————————————————	10-				-					***************************************				
15————————————————————————————————————	-8													
20			SHALEY CI	AY (CH) - very hard, gray		4.5+						23		··
20	15-				-		: PRINCE							
20	-						,							
4.5+ 99 67 23 44 19 109 7				Ž		4,5+	•					20		*********
4.5+ 99 67 23 44 19 109 7	20-				<u> </u>				-	_				····
4.5+ 99 67 23 44 19 109 T	-		2											
25						4.5+		99	67	23	44	19	109	16:
	25-							_	$\dashv$	-	_			
									***************************************					
CLAYEY SAND (SC) - gray 3.5			CLAYEY SAI	ND (SC) - gray		3.5			+	-	-	17	$\dashv$	·····
OG OF BORING NO. B 1-35 Continued Next Page Plate A 4										_				······································

	ct No 1-10	s. 599	6	Boring No. B 1-35	Exide Technologie Frisco, Texas	S					Ror	ie E	ngli	neer	ìng
Locat					Water Observations			_	_			***************************************			
Comp Depth	letic	ր 39.(	n'	Completion Date 8-23-11	Groundwater seep drilling.	age was o	bserv	ed at a	dept	h of a	abou	t 18'	while	e	
*************			Suri	ace Elevation	Туре		T			<u> </u>	Ι	T	T	1	<u> </u>
Depth, Ft.	Symbol	Samples		Strat	um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Piastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Waight pof	Uncomfined
														-	
				SHALEY CI	LAY (CH) - very hard, gray		4.5+	## #####	99	56	20	36	16		***************************************
-35				SHALE - gra	у										
		V		Boring Termi	nated at 39 Feet			100/3.5"							
				Doring Termi	nawa at 39 Peet										
	***************************************			1											
									*				-		
							***************************************								
												-	7777		
***************************************	-						***************************************				***************************************				

Projec 11	t No -16		6	Boring No. B 2-10	Exide Technologies	***************************************	**************************************				Ron	e E	ngir	ieer	ing-
Locati				<u> </u>	Frisco, Texas Water Observations			······		·		-			
					Groundwater seepage	was n	ot obs	erved	while	dril	ling.	and :	the b	orebo	ole
Comp Depth			^,	Completion	appeared dry at comp	letion.							_		
- opul		10.		Date 8-23-11 face Elevation	Trees		·			·	·	······			***************************************
			ווויט	THE SECULOR	Type CFA									-	
Oepus, F.	Symbol	Samples		Strat	tum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Piastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pof	Unconfined Compression osf
						2	Pe R	유		35	콘트	ΞĒ	₹00 200	25	202
-				FILL: SAN brown, wi nodules	DY FAT CLAY - very hard, dark th limestone fragments and calcareous		4.5+		69	<b>5</b> 5	19	36	21		
7	1			- pieces of t	rash at 2'		4.5+	<del></del>	<del>                                     </del>				21	103	1052
	S.														
-	$\mathbb{S}_{j}$						4.5+		-				14		
5 -				SANDY CL	AY (CL) - hard, light yellowish brown.	-							,,		
-				with grave	I, calcareous										
-							3.5						20		
				***************************************		L									
				***			4.5+			-			22		
				- light gray a	ind yellowish brown, with sand seams										
竹	Ĩ			Boring Term	inated at 10 Fect										
OG O	FF	L ROI	· N	G NO. <b>B</b> 2	2-10	<u></u>							DL	ate .	

Project No. 11-169	96		Boring No. <b>B 2-25</b>	Exide Technologies Frisco, Texas		×4	***************************************			Ror	ie E	ngi ⊚	nee	ring-
Location			20 N	Water Observations Groundwater seepage	was	nhsers	ed at a	dent						
Completion Depth 2:	5.0		Completion Date 8-23-11	drilling.	1,45	, Due 1		uopi	01			VY III II		
		Surfac	∝ Elevation	Type CFA		T					T	T	Π	
Symbol	Samples			um Description	REC%	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plaetic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pof	Unconfined
			FAT CLAY with calcare	(CII) - dark brown to brown and gray, cous nodules		4.5+						19		
					-	4.5+				<u> </u>	<u> </u>	18	<u> </u>	
- 5 -			SANDY LEA and gray, ca	N CLAY (CL) - light yellowish brown leareous		4,5+		65	38	14	24	16		ļ.,
					-	4.5						15		
					-	3.5		-				29		
-10-			- with limesto	ne layers 10'-12'										
			SHALEY CL	AY (CH) - very hard, dark gray										
15						4,5+						22		
			- slickensided		-	4.5+	·····	99	63	23	40	19	109	17
20-			- snckensided				······································							
			*						7					
25			- slickensided			4.5+	***************************************					20	107	92
			Boring Termine	sted at 25 Feet										
***************************************					***************************************						***************************************			
OG OF BO	~****		NO. <b>B 2</b> -											

Project 1		o. <b>699</b>	6	Boring No. <b>B 2-35</b>	Exide Technologies Frisco, Texas						KOI	ie E	ng!!	neer	ıng-
Locat	ion				Water Observations  Groundwater seepag	e was o	bserv	ed at a	dept	h of :	abou	t 25'	while	 B	
Comp Depth		n <b>35.</b>		Completion Bate 8-25-11	drilling.	•									
			Su	rface Elevation	Type CFA			<b>+</b> _E				T			
Depth, Ft.	Symbol	Samples			um Description	REC%	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Piastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined
				FAT CLAY calcareous possible fil	(CH) - hard, dark brown, with nodules and limestone fragments, I								16		
_							2.5		89	60	22	38	26	97	4
_				- dark browt	and gray		2.5/4.5	<b>1411</b>					29		
				- dark gray a	nd olive, with calcareous nodules		2.25	***************************************					28		
-							2,25		89	69	24	45	27		
-10-				FAT CLAY	(CH) - dark gray										
15-				- with gravel	size calcareous nodules 14'-15'		1.75		57	54	18	36	19		
				SHALEY CI and yellowi	AY (CH) - hard to very hard, light gray sh brown			***							
20				- slickensided			3.0						30	91	4
															************
				- dark gray, si		<u>Σ</u>	4.5+		99	62	22	40	21	107	153
															***************************************
							4.5+						15		······································
og c	OF :	ВО	RD	NG NO, $\mathbf{B}$ 2	-35 Continued Nex	1 Page							Pla	te A	70

Water Observations Groundwater seepage was observed at a depth of about 25' while drilling.  Completion Date 8-25-11  Surface Elevation  Stratum Description  Stratum Description  Stratum Description  Water Observations Groundwater seepage was observed at a depth of about 25' while drilling.  Surface Elevation  Stratum Description  Stratum Description  Stratum Description  Water Observations Groundwater seepage was observed at a depth of about 25' while drilling.  Surface Elevation  Stratum Description  Stratum Description  Stratum Description  Stratum Description	Project No. 11-16996	Boring No. B 2-35	Exide Technologie Frisco, Texas	S		ecoccidiocece e e e e ve			KON	e E	ngir 명	eer	ing-
Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum Description  Stratum D	ocation .		Water Observations Groundwater seep	age was o	bserv	ed at a	dept						······································
Stratum Description  Sequence Stratum Description  - slickensided  - slickensided  SHALE Blowslined Connection Strate Str		Date 8-25-11	_			••••••	***************************************	*					
- slickensided 4.5+ 16 118 23  SHALE -gray 100/3.0"	Sur	lace Elevation	CFA CFA			##	0					_	
SHALE -gray  100/3.0"	Depth, Ft. Symbol Samples	Strat	um Description	REC%	Penetrometer Reading, TSF	SPT - Blows/Fo TCP - Blows/In	Passing No. 20 Sleve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pef	Unconfined Compression
SHALE -gray  100/3.0"		The second secon											
SHALE -gray  100/3.0"		- slickensided	i		4,5+						16	118	237
	5 [ ]	SHALE -gray						···········					
Boring Terminated at 38 Feet						100/3.0"							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Project	on No L-10		6	Boring No. B 3-10	Exide Technologies Frisco, Texas						KOľ	e E	ngir ■‰■	ieer	ing-
Locat	ion	•		***************************************	Water Observations	***************************************					-				
Comp	letic	······································		Completion	Groundwater seepag appeared dry at com	e was n	ot obs	served	while	dril	ling,	and 1	be b	orebo	ole
Depth		" 10.	0'	Completion Date 8-26-11	appeared by at com	hierron.									
	Γ	ΓÏ		face Elevation	Туре						Τ		T	Γ	
			:		CFA			검류					1	<b>.</b>	
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Plastic Umit, %	Plasticity Index	Moisture Contant, %	Dry Unit Weight pof	Unconfined
				limestone f organics an	CLAY - dark brown to brown, with ragments, calcareous nodules, plastic, id paper, sandy		4.5+						11		
						-			69	60	20	40	11		
						-									
- 5						<u> </u>			<u> </u>				18		
-				- dark gray, v	vith calcareous nodules, paper, trash				80	63	22	41	30		
												**			
								***************************************					22		
10-				Rorina Terri	nated at 10 Feet			·····							*********
og c	) F I	BOI	RIN	G NO. <b>B3</b>	-10								PI	ate.	A &

	ct No <b>1-1</b> (		6	Boring No. B 3-25	Exide Technologies Frisco, Texas	·····					Ror	ne E	ngi	neer	ing-
Locat	ion	**********			Water Observations  Groundwater seepag	e was n	ot ol	bserved	while	e dri)	ling	ond :		oreh	
Comp Depu		n 21.		Completion Date 8-26-11	appeared dry at com	pletion	•				Б,		tue D	OI CH	oic .
			Sur	face Elevation	Type HSA/CFA			**							
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer	SPT - Blows/Foot	Passing No. 200 Sleve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	ory Unit Weight	Unconfined Compression
				FILL: CLA) fragments a paper	' - dark grayish brown, limestone nd roots, with plastic, slag, gravel and								12	OR	20.5
_							-		54	58	20	38	9		
5 —			٠										26		
-													43		······································
	3			FILL: FAT C	LAY - firm, dark gray and yellowish		1.25		73	60	20	40	32		*******************************
10-1				FILL: FAT C	LAY - very soft, gray, with calcareous										
				nodules and	wood, wet		0,25								
5				- calcareous no	dules 14' to 14.5'		0,23						24		
				SHALEY CL	V (CH) - gray, with iron oxides										
				Stains			3.0		99	80	28	52	27	1	
	1			Boring Termina	ted at 21 Feet			46/12"							
***************************************														***************************************	
	***************************************										***************************************				
								**************************************		,					
		OB	D.I.	3 NO. <b>B 3</b> -	25										 \.9

Projec 11 Locati	-16	1996	5	Boring No. B 3-35	Exide Technologies Frisco, Texas	i			***************************************				ne E	1911 11911		11(0
Compl Depth	letio	35.0		Completion Date 8-29-11	Water Observations Groundwater seepa drilling.	ige v	vas o	bser	ed at a	dept	h of :	bou	t 18'	while	e	-
			Surf	ace Elevation	Type HSA/CFA											Γ
Depth, Ft.	Symbol	Samples		Strat	um Description		REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Plastic Umit, %	Plasticity Index	Moleture Content, %	Dry Unit Weight pcf	Unconfined
-				FILL: CLA	' - brown, with gravel, wood, and slag					69	50	19	31	8		
· -	(12.12.19			FILL: SLAC	i - gray, slag, rock fragments, gravel siz	e.										
-5-	3.22.22.2															
-10-		X		CLAY (CH) rock fragme	-dark brown, with slag, gravel and nts, possible fill				V=50/5.0					23		
15				FAT CLAY (	CH) - soft to firm, dark grayish brown th brown, with weathered limestone	··· <del>············</del>		1.0		96	65	24	41	36		
						Δ̈́		0.5			68	23	45	35		
20-															-	**************************************
15				- dark grayish weathered lii	brown and yellowish brown, with nestone			1.25						36		
				SHALEY CLA	. Y (СН) - gray				N=64		55	18	37	19		
10-	4	1			NATION 1.00					_			_		$\bot$	**********
o DC	F E	3OF	M	G NO. <b>B</b> 3	-35 Continued No	ext P	age						P	late	<b>A</b> .	10:

Depth 35.0'		Frisco, Texas  Water Observations Groundwater seeps drilling.  Type HSA/CFA  um Description	age was o	Penetrometer Reading, TSF	SPT - Blows/Foot part TCP - Blows/Inch B	No. 200		a bou		while	lght	
Symbol Symbol Symbol	Strat	HSA/CFA um Description	REC%		SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Pineto Limit, %	Plasticity Index	Moisture Content, %	ory Unit Weight	nconfined
		um Description	REC%		SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Piaeto Limit, %	Plasticity Index	Moisture Content, %	Jry Unit Weight	nconfined ompression
35	Boring Termi	nated at 35 Feet									n II	Dΰ
.35	Boring Termin	nated at 35 Feet	1	1	=94/11.5	•				18		
									~			

Proje 1		o. 6996	5	Boring No. <b>B 4-10</b>	Exide Technologies Frisco, Texas						ROP	ie E	ngir ■₩	ieer	ıng-
Loca	tion				Water Observations	***************************************									
Com	pletic	)fi		Completion	Groundwater seepage	was o	bserv	ed at a	dept	th of	abou	it 8' 1	vbile	drill	ing.
Dept		10.0		Date 8-26-11											
		П	Surf	ace Elevation	Туре СГА			errottilationH	T		Ī	T	Γ	<u> </u>	<del></del>
a r findad	Symbol	Samples			um Description	REC%	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %		Plastic Limit, %	Plasticity Index	Moleture Content, %	Dry Unit Weight pcf	Uncomfined
_				FILL; FAT and gray, w	CLAY - very hard, dark brown, brown yith limestone fragments and calcareous		4,5+		86	56	20	36	12		
	F.						4.5+		<u> </u>				11		
- د									<del> </del>				23	· ·	
-									ļ			ļ	18		
-					•								10		
-				- becomes sa	ndy at B'		4.5+		64	56	20	36	17		
10-	×			<u> </u>	nated at 10 Feet										
) OG	OF	BOI	P I'N	G NO. <b>B</b> 4	I-10								Pla		

Project N		Boring No. <b>B 4-35</b>	Exide Technologie Frisco, Texas	28		***************************************				Ror	ie E	ngir	1991	ing
Location Completi		Complete	Water Observations Groundwater seep drilling.	age w	'as o	bserv	ed at a	dept	h of	abou	t 13'	while	•	
Depth	on 38.	Completion Date 8-25-11 Surface Elevation	Type	······································	·	· · · · · · · · · · · · · · · · · · ·		<del></del>			•			
		Physics Ficasion	CFA CFA				호등	0						
Depth, Ft. Symbol	Samples		tum Description		REC%	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Umit, %	Plastic Limit, %	Plasticity Index	Molature Content, %	Dry Unit Weight pef	Unconfined
-6		FILL: CLA limestone	YEY SAND - loose, brown, with fragments and calcareous nodules	***************************************								10		Ī
Cr.Cr		- light gray	and yellowish brown			0.5		34	58	20	38	19		
- 5 - 6		FILL: SAN	DY FAT CLAY - firm, dark brown			2.25						35		
						1,25	***************************************					47		
						1.25	***************************************	69	62	23	39	36		
-10							·····							
		The state of the s		V										
		FATCLAY	(CH) - hard, brown, with sand	Ϋ́		3.75						20		••••
-15 -		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s					<del></del>							~~
		- light yellov	vish brown and light gray			2.25	***************************************					26		*****
- -20		Amount of the latest of the la												
	***************************************											***************************************	***************************************	
		SHALEY CI	.AY (CH) - dark gray, slickensided			4.5+		98	56	21	35	17	115	1
25-											$\dashv$	$\frac{1}{1}$		<del></del>
						4.5+						18	113	13
OG OF	BOI	RING NO. $\mathbf{B}$	1-35 Continued N	lext Pa		<u>-</u> -L		士			<u></u>	late		-

1	ci N 1-1	o. 699	6	Boring No. B 4-35	Exide Technologi Frisco, Texas	≥s					KO	e E	ngii	neer	rın,
Loca	tion				Water Observations			_							
Com	oletic	าก		Completion	Groundwater seep drilling.	age was o	bserv	ed at a	dept	h of	abou	t 13'	while	e	
Depti		38.	0'	Date 8-25-11	<b>b</b>										
			Surf	ace Elevation	Type CFA		1	T	Ī	T			T	Γ	Γ
Depth, Ft.	Symbol	Samples		Strat	um Description	REC%	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Uquid LIMIT, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pcf	Hoopean
** ***							4.5+								
				***************************************	-		4.57						21		
				SHALE - dar	k gray										
		V				<u> </u>		100/4.0"	-						
_		1		Boring Termin	nated at 38 Feet										
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				3 NO. <b>B 4</b> -	***************************************			L			1		- 1		

Project 11		). 599	6	Boring No. B 5-10	Exide Technologies Frisco, Texas		er e emili (see visitee termen		« <b></b>		Ror	e E	ngi Pa	neer	ing-
Locati				Completion	Water Observations Groundwater seepag appeared dry at com	e was n	ot obs	erved	while	dril	ling,	and	the b	oreho	ole
Depth		10.		Date 8-22-11		pienon.		, tir n							
			3011	acc Lievanon	Type HSA/CFA			<b>4</b> 5							
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Piasticity Index	Molsture Content, %	Dry Unit Weight pcf	Unconfined Compression
_	Ŋ			FILL: FAT ( limestone g	CLAY - very hard, dark brown, with ravel		4.5+		60	59	19	40	14		20
5-				- with plastic					·				7		
						-	4.5+						14		
						***************************************									
+			,	FAT CLAY ( fragments	CH) - hard, dark brown, with limestone		3.25	***************************************	96	68	24	44	32		
og o	FB	OF		3 NO. B 5-	-10							-	) ) 	e A	12

Projec 11 Locati	-10	599	6	Boring No. B 5-25	Exide Technologies Frisco, Texas				***************************************		Ror	ie E	ngii [後]	neel	ing
Comp Depth	letio	n 28.		Completion Date 8-26-11	Water Observations Groundwater seepag drilling.	ge was (	bserv	ed at a	dept	h of	abou	t 18'	while	B	
			Surl	face Elevation	Type CFA				T				T		Π
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foat TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastio Limit, %	Plasticity Index	Moleture Content, %	Dry Unit Weight	Unconfined
				FILL: LIM	STONE BASE - light brown								2		Ī
	2.2			*									7		
4	ď,			FILL: FAT	CLAY - very hard, dark brown, with		4.5+		-	67	23	44	29		
· 5 				limestone f	regments							77			
													6		
							2.25			71	24	47	33		
10-				FAT CLAY with sand so	(CH) - light gray and yellowish brown, carns		-						<b>—</b>		
							4.5+								
15							4,37						20		
-															
				SHALEY CL ferrous stain	AY (CH) - very hard, gray, with s	7	4.5+		97	65	23	42	25		PI/Addingson
20-								•		1					
-				- slickensided											***********
15													20	111	
				SHALE - dark	gray										
]=	V			172	3.1.450 P			100/4.0"					$\neg \dagger$	$\neg$	
				Boring Termin.	alca al 28 Feet										************
 OG C	F E	1 BOI	NIN		-25					L			Plat		

Project No.		6	Boring No. <b>B 6-10</b>	Exide Technologies Frisco, Texas		~				Ror	e E	ngir	neer	ing-
Location	***************************************			Water Observations Groundwater seepage	wasn	ot obs	erved	while	*****					
Completic Depth	n 10.(		Completion Date 8-22-11	appeared dry at comp	oletion.					-111 Б,	AUU 1	ine D	O) CII(	ЛС
		Suri	ace Elevation	Туре СҒА			4.5							
Depth, Ft.	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Plastic Umit, %	Plastioity Index	Moisture Content, %	Dry Unit Weight pcf	Unconfined Compression
			FILL: CLAY	y' - dark brown, with gravel, limestone slag fragments and plastic fragments		4.5+	,					13		
5 - 5 - 6			- with concre	te fragments and plastic								12		
<u> </u>			FILL: SAND	Y FAT CLAY - soft, brown		0.75		64	59	22	37	30		
10				nated at 10 Feet										
OG OF 1	BOI	RIN	G NO. <b>B 6</b> -	-10								Plat	te A	15

Project 1	L-16	). 5 <b>99</b> (	5	Boring No. B 6-25	Exide Technologies Frisco, Texas Water Observations						Kor	ne E	ngi ्रा	neel	ring
Comp Depth	letio	n 28.0	 )'	Completion Date 8-26-11	Groundwater seepage appeared dry at comp	was n letion.	ot ob	served	while	dril	ling,	and	the b	oreh	ole
	Γ	П		face Elevation	Туре	T	T	T	T -	T	T	1	T	T	Т
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blaws/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Pisstio Limit, %	Plasticity Index	Moisture Content. %	Dry Unit Weight pcf	Unconfined
		Y		with limest	DY FAT CLAY - brown to dark brown, one fragments			100/5.25							
				1			L						12		
		4		concrete fr	Y - light gray, with ground concrete, agments, finc to medium				70	58	21	37	11		İ
4				1						40	23	17	7		ऻ
- 5		V						24/12"					11	T	
	X	1		slag, wood	CLAY - dark brown, with plastic, glass, fragments, concrete fragments					61	30	31	25		<u> </u>
_	?						2.0						35		
		1				-							34		
		7		***************************************				12/12"				,,,,			<del> </del>
15-1							2.25		85	64	22	42	29		
				SHALEY CL brown and g	AV (CH) - hard to very hard, light ray, with iron stains		4,5						28		
20-															************
1				- slickensided			3.0		66	46	15	31	16	119	20.
25				SHALE - gray					$\dashv$	$\dashv$	$\dashv$		+		<del>~</del>
\{ = \}	V						_	00/2.75		$\dashv$		_	_		······································
1				Boring Termini	ated at 28 Feet				+		T	1			•
 DG O	F F	SOF		G NO. <b>B 6</b>	-25								DI -	te A	

	-10	). 5 <b>99</b> (	5	Boring No. B 7-10	Exide Technologies Frisco, Texas	•					Ron	e E	ngir	ieer	ing-
Locati Comp Depth	letio	10.0		Completion Date 8-22-11 face Elevation	Water Observations Groundwater seepag appeared dry at com	e was n pletion.	ot obs	erved	while	dril	ling,	and (	the b	oreho	ole
Depth, Ft.	Symbol	Samples	Sur		Турь НЅА/СҒА		eter TSF	vs/Foot vs/Inch	0. 200				9	/eight	- <u>5</u>
		Sarr			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %		Plastic Limit, %		Moisture Content, %	Dry Unit Weight	Unconfined Compression
				FILL: FAT	CLAY - very hard, brown, with tagments		4,5+		80	59	20	39	19		
				FILL: SLAC fragments	GRAVEL - brown, with slag broken										
- 5 - 												,	·		
-10-													6		
		***************************************			s										•
***************************************						THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE 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Project 1	l-16	599 	6	Boring No. B 7-25	Exide Technologies Frisco, Texas Water Observations						KOI	le E	ngı H <sub>iş</sub> i	neer	III
Comp Depth		n 29.	*****	Completion Date 8-29-11	Groundwater seepage drilling.	was (	bserv	ed at a	dept	h of a	abou	t 13'	whil	e	
			Surf	face Elevation	Type HSA/CFA	T			T	Π		Τ	T		Γ
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Fassing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity Index	Molsture Content, %	Dry Unit Weight pcf	Unconfined
				FILL: FAT	CLAY - dark brown and dark gray, with I slag fragments	1					<del>-</del>		11	-	-
	X	V					1	3/12"			<b></b>	<del>                                     </del>	<del> </del>	<del>                                     </del>	┢
				FILL: SLAC	- gray, slag fragments, gravel size	,		7/138					7		
- s -				- slag and pla	stic	-	-	7/12"	34	50	19	31	14		
						-	$\vdash$								_
		₹				1	I	5/12"	$\vdash$					-	
				- slag fragme: wood	nts, plastic, piece of shoe, cloth and								27		
- 10				#### THE PROPERTY OF THE PROPE		-									
				FAT CLAY (	CH) - firm, dark gray and brown		1.0						37		
-15-				- with sand sea	ams '		2.0		82.	66	24	42	18	107	
25-				SHALEY CL/ iron staining	AY (CH) - very hard, dark gray, with		4.5+						27		
				SHALE - dark	-		1	00/4.75*							
T	T			Boring Tennina	ited at 29 Feet	$\neg$			-	-	$\dashv$	$\dashv$	$\dashv$	$\dashv$	
		<u></u>		G NO. <b>B 7</b> -	A.F.									te A	

Project N 11-1	16	996	Boring No. B 8-10	Exide Technologies Frisco, Texas		······································				Ron	e E	ngir I∉II	eer	ing-
Location Completi Depth	ion	.0'	Completion Date 8-22-11	Water Observations Groundwater seepage appeared dry at com	e was n pletion.	ot obs	served	while						
	Ī	Su	rface Elevation	Туре СГА		T		Ī			Γ	T		
Depth, Ft.	200,1100	Samples		um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Fool TCP - Blows/Inch	Passing No. 200 Sleve, %		Plastic Limit, %	Plasticity Index	Molature Content, %	Dry Unit Weight pcf	Unconfined Compression
2000 000 000 000 000 000 000 000 000 00			Спау	GRAVEL - broken slag, concrete rubber, plastic fragments, with brown the brown and the brown are the brown are the brown the brown are the bro					46	16	30		*	
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RONE ENGINEERING LOGS 11-18998-GPJ RONE GDT 9/26/11

	-16	990	5	Boring No. B 8-25	Exide Technologies Frisco, Texas						NOI	ie c	i y	neer	IIIG
Locatio	n				Water Observations										
Comple	etio	n		Completion	Groundwater seepag appeared dry at com	e was n pletion	ot ob:	served	wbild	e dri)	ling,	and	the b	oreh	ole
Depth		25.(		Date 8-24-11			-								
			Sur	face Elevation	Туре СГА	T	T		T	T	T	T	1	T	Г
Depth, Fr.	Symbol	Samples			tum Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Clquid Cimit, %	Plastic Limit, %	Plasticity Index	Moisture Content, %	Dry Unit Weight pof	Unconfined
	Ý			FILL: GRA	VEL - railroad ballast, broken rock								6		
	Ź			SANDY FA	T CLAY (CH) - very hard, dark brown		4.5+		-						
-				and olive,	with limestone fragments		4.3*		52	55	18	37	9		
-5-					· .		4.5+	10 <b>-41</b>					10		
				***************************************			4.5+						12		
	1														
1				FAT CLAY calcareous	(CH) - firm, dark gray and brown, with nodules		1.5		87	66	22	44	29		***************************************
10-															···········
15-1				- with sand			1.75						33		
				- with gravel (	at 18'-20'								15		***************************************
				SHALEY CL.	AY (CH) - very hard, gray		4.5+		90	79	27	52	26		
5				Boring Termin	nted at 25 Feet										······
***************************************									1	***************************************	V	***************************************	***************************************	-	
OG OF	B	OR	INC	$\mathbf{B}$	-25	1 1			L				DY - 4	e A	

Location    Completion Date 8-24-11   Surface Elevation   Type   CFA	reholo	t in	the t	and	ling,	e dri)	while	erved	obs	no	Wası	Water Observations			*********	ion	Loca
Completion  Date 8-24-11  Surface Elevation  Stratum Description  Stratum Description  FILL: GRAVEL - railroad ballast, broken roack, with layer of clay  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible  1.75  Surface Elevation  Type  CFA  Stratum Description  FILL: GRAVEL - railroad ballast, broken roack, with layer of clay  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible  1.75  Surface Elevation  Type  CFA  Surface Elevation  Type  CFA  Surface Elevation  Type  CFA  Surface Elevation  Type  CFA  Surface Elevation  Type  CFA  Surface Elevation  Type  CFA  Surface Elevation  Type  Surface Elevation  Type  CFA  Surface Elevation  Type  Surface Elevation  Ty		t in		bae	ling,	e dril	While	erved	obs	no	Was I						
Surface Elevation  Stratum Description  Stratum Description  Stratum Description  FILL: GRAVEL - railroad ballast, broken roack, with layer of clay  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible	pof	it Weight				·				۵.	letion	appeared dry at comp	Completion Date 8-24-11	ים.			Com Dept
Stratum Description  Stratum Description  FILL: GRAVEL - railroad ballast, broken roack, with layer of clay  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible fill  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible fill	pof	it Weight					T		Т	<u> </u>	T	Туре	face Elevation			Γ	••••
FILL: GRAVEL - railroad ballast, broken roack, with layer of clay  FAT CLAY (CH) - firm to very hard, dark gray and olive, with limestone fragments and gravel, possible fill  The state of the state of	-	2,2	foisture Content, %	lasticity ndex	Yastic .imit, %	Jquid Jmit, %	Passing No. 200 Sieve, %	SPT - Blows/Foot TCP - Blows/Inch	Reading, TSF		REC %	um Description			Samples	Symbol	Depth, Ft.
						-			1	Ť	┪¯	VEL - railroad ballast, broken roack, of clay	FILL: GRAV with layer of	*********		×	
			17	38	21	59	54	<del></del>	75			(CH) - firm to very hard, dark gray and limestone fragments and gravel, possible	FAT CLAY (4 olive, with fill				-
	-		18						5+	14	-						-5
FAT CLAY (CH) - hard to firm, dark brown and 3.0 gray, possible fill, with gravel layer 8'-10'	-		33						.0	1		(CH) - hard to firm, dark brown and ble fill, with gravel layer 8'-10'	FAT CLAY (C gray, possible				****
1.25			31						25	1							_

Project 11 Locat	1-10	599 <del>6</del>	5	Boring No. B 9-25	Exide Technologies Frisco, Texas Water Observations						Ror		- <;r		
Comp Depth		25.0		Completion Date 8-24-11	Groundwater seepa appeared dry at cor	ge was n npletion	ot obs	served	While	e dril	ling,	and	the b	oreh	ole
			Surf	ace Elevation	Турс СГА			ぢた						Ī	
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity index	Moisture Content, %	Dry Unit Weight pef	Unconfined
				FILL: GRA	VEL - railroad ballast, broken rock								5		Ī
				SANDY FAT brown, with	CLAY (CH) - firm, dark brown to		2.0			<del> </del>			25		
 -5-							2.0		61	59	20	39	19	<u> </u>	
						-	3,0		<u> </u>		<u> </u>		29		
-10-				- brown and g	ersy .		1.5						34		
· -															
-15				FAT CLAY (	CH) - hard, dark gray and brown, with		2.5		82	63	23	40	25		
-20-				FAT CLAY (	CH) - firm, brown, with sand, wet		1.25	***************************************					30	96	,
+						**************************************									
25							1.25						24	101	,
-				Boring Termin	ated at 25 Feet										***************************************
***************************************										- Constitution	***************************************	***************************************			
.OG (	 DF	BOR	NIN:	G NO. <b>B9</b>	-25			·					D) -	te A	-

	<u> -16</u>	). 599(	5	Boring No. B10-25	Exide Technologies Frisco, Texas						KOI	e E	ngir De <b>x</b>	ieer	ıng-
Locati				Completion	Water Observations Groundwater seepage drilling.	was o	bserv	ed at a	dept	h of a	abou	t 13'	while	<u>.</u>	···········,
Depth		25.0		Date 8-24-11	_	***************************************									
			Suri	face Elevation	СГА			<b>4</b> E							
Depth, Ft.	Symbol	Samples			um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Passing No. 200 Sleve, %	Liquid Limit, %	Plaetic Limit, %	Plasticity index	Moisture Content, %	Dry Unit Weight pcf	Unconfined
				FILL: GRA	VEL - gray, railroad ballast								8		
				SANDY FAT brown and	CLAY (CH) - very hard to firm, dark gray, with limestone fragments		4.5+		64	54	18	36	18		
- 5 -							2.0						24		
							13						27		
-							2.75						33		
-10 -															
				FAT CLAY	CH) - firm to very soft, dark gray and	,	2.0	······································					35		
-15				brown, wet											••••
-															
							<0.25	<u>-</u>					42		······································
20-								************************							econ ————————————————————————————————————
I				CLAYEY SA	ND (SC) - light brown, with gravel				23	42	17	25	18		
25				Boring Termin	ated at 25 Feet			······							
				La participa de la constanta d							***************************************			***************************************	
		1		***************************************									***************************************		
 OG (	OF I	BOI	NIS	G NO. <b>B1</b> (	)-25	J						L	Plac	te A	าว

Project No. 11-16996	Boring No. B11-25	Exide Technologies Frisco, Texas	~~~~~~~~~~~					Ror	le E	ngi	nee	ring
Location		Water Observations	**************************************									
Completion	Completion	Groundwater seepa drilling.	ge was	observ	eo at a	aept	и от :	a Dou	t 18.	while	е	
Depth 25.0	Date 8-29-11 Surface Elevation	Туре		<del></del>		<del></del>	<del>,</del>	·	<b></b>	· · · · · · · · · · · · · · · · · · ·		
		CFA			45							
Depth, Ft. Symbol Samples		um Description	REC %	Penetrometer Reading, TSF	SPT - Blows/Foot TCP - Blows/Inch	Pausing No. 200 Sieve, %	Liquid Limit, %	Plastic Limit, %	Plasticity index	Moisture Content, %	Dry Unit Weight pef	Unconfined
<b>3</b>	and slag	el fragments, concrete, dark brown clay								13		
-63-						36	36	17	19	12	<u> </u>	L
2.12.12		el slag, plastic, concrete and brown clay					00	, 11	19	12		
	FILL: - slag	and concrete fragments							•••••			
	EATOLIV	CH) - soft to firm, dark brown and				>	2					
	gray, with tr	ace gravel, wet										
			☑				.					
20-		÷	-	0.5			~			32		PRINCE
	- dark gray and nodules	d yellowish brown, with calcareous		1.5						25	101	***************************************
25	Boring Termin	ated at 25 Feet										
						***************************************	Laft					
	ING NO. <b>B11</b>											

	ect N 11-1	699	6	Boring No. B12-25		Exide Technologies Frisco, Texas						KO	ne E	ngii  曖	neel	ring-
	ation				Water Obse	rvations Groundwater seepage	e was r	ot ob	served	at a c	dept	of a	bout	12' v	vhile	
Dep	pleti th	on 25.		Completion Date 8-24-11		drilling.										
				ILC Elevation	Туре	CFA			55							
Depth, Ft.	Symbol	Samples				cription	REC%	Penstrometer Reading, TSF	SPT - Blows/Fact TCP - Blows/Inch	Passing No. 200 Sleve, %	Uquid Limit, %	Plaetio Umit %	Plasticity Index	Moisture Content, %	Dry Unit Weight pof	Unconfined Compression
«•	-19:			FILL: GRAV gravel	EL - railroac	l ballust and limestone									-	
	35.00			FILL: FAT C	CLAY - very	hard to hard, dark gray		4.5+				<u> </u>	-	18	108	150
- 5 -	12.43						-	4.5+	<b></b>					30		
							-	2.75		88	62	23	39	24		
				- firm, gray, de	ark brown and	d olive	-	1.25	***************************************					30		***************************************
 -10-									······································					_		
						<u>7</u>	Z									
				- organics and	wood fragme	ints at 13'-15'								247		
-15																
			`	FAT CLAY (C brown, with s	ll) - firm to l and	hard, dark gray and										
			è					1.0		77	58	21	37	30	94	30
-20-										_	+					
								3.0		_	_			26		
25	4			Boring Terminat	cd at 25 Feet											
				, · · · · · · · · · · · · · · · · · · ·			***************************************		-							
LOG (	OF E	OR	ING	NO. B12-	-25					······································	t		I	Plat	 _ A	75

	Major	Divisions	Grp Syn	i ypicai Names	Laboratory Cla Criteri		Rone	Engineerin
e size)	n is larger	Clean gravels (Little or no fines)	GW	Well graded gravels, gravel-sand mixtures, little or no fines	ined soils	$C_{u} = \frac{D_{u}}{D_{o}} greater$	eater than 4: C	= (D_)² between 1 and 3
o. 200 Siev	Gravels n half of coarse fractio than No. 4 Sieve size)	Clean (Little or	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	e. ), coarse-gra	1	eeting all grad for G	ation requirements
Grained Soils is larger than N	Gravels (more than half of coarse fraction is larger than No. 4 Sieve size)	th fines iable fines)	GM	Silty gravels, gravel - sand - silt mixtures	in size curv 200 sleve size P,SW,SP C,SM,SC dual symbo	Liquid and below "A great	Plastic limits " line or P.I. er than 4	Liquid and plastic limits plotting in hatched zone
Coarse - Grained Soils (more than half of the material is larger than No. 200 Sieve size)	(more tha	Gravels with fines (Appreciable amount of fines)	GC	Clayey gravels, gravel - sand - clay mixtures	Determine percentages of sand and gravel form grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sleve size), coarse-grained soils are classified as follows Less than 5 percent	Liquid and above "A' great	Plastic limits line with P.I. er than 7	between 4 and 7 are borderlina cases requiring us of dual symbols
Co alf of the m	action is size)	Clean sands (Little or no fines)	sw	Well graded sands, gravelly sands, little or no fines	nd and gra	$C_{u} = \frac{\Omega_{u}}{\Omega_{o}}$ gre	eater than 6: C	$= \frac{(D_{so})^2}{D_{to} \times D_{to}}$ between 1 and 3
ore than h	Sands (more than half of coarse fraction is smaller than No. 4 Sieve size)	Clear (Little or	SP	Poorly graded sands, gravelly sands, little or no fines	ages of sa age of fines s percent	Not me	eting all grada for S	ation requirements W
Œ)	Sa than half o iller than N	Sands with fines (Appreciable amount of fines)	SM	Silty sands, sand silt mixtures	Determine percental Depending on percental are classified as follows Less than 5 p More than 12	Liquid and below "A less	Plastic limits Ine or P.I. than 4	Liquid and plastic limits plotting between 4 and 7
	(more t sma	Sands v (Appri amount	sc	Clayey sands, sand clay mixtures	Determin Depending are classifi Les Mo 5 t	above "A"	Plastic limits line with P.I. er than 7	are borderline cases requiring us of dual symbols
Sieve)	Clays Hose	(0	ML	inorganic slits and very fine sands, rock flour, slity or clayey fine sands, or clayey slits with slight plasticity	60			
ined Solls is smaller than No. 200 Sieve)	Silts and Clays	than 50)	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, and lean days	50		CH	
oils iller tha			OL	Organic silts and organic silty clays of low plasticity	X 40			
AT I	lys eater		МН	inorganic silts, micaceous or diatomaceous fine sandy or silty solls, elastic silts	PLASTICITY INDEX		JE 01	and MH
Fine - (	Silts and Clays louid limit great	than 50)	сн	Inorganic clays of high plasticity, fat clays	20	CL		Tario (VIII)
Fine - Gra (more than half of the material			ОН	Organic clays of medium to high plasticity, organic silts	10	ML	and OL	
(more th	Highly Organic	solls	Pt	Peat and other highly organic soils	0 10		0 50 60 LIQUID LIMIT ISTICITY CHAR	70 80 90 100

SOIL OR ROCK TYP	ES	***************************************		
PCZ CLAV		Т		Rone Engineering
CLAY			SAND-WELL GRADED	# W
FAT CLAY			LIMESTONE-WEATHERED	
LEAN CLAY			CONCRETE	
SANDY CLA	Υ	<b>18</b> 2	FILL	
LIMESTONE			GRAVEL	Shelby Auger Split Tube Spoon
CLAYEY SA	ND		CLAYEY GRAVEL	
SHALE			MARL	
SAND-POOF	RLY GRADED		SILT	Rock Cone No Core Pen Recovery
TERMS DESCRIBING	CONSISTENCY	CONDI	TION, AND STRUCTURE OF SOI	1 000 1100010()
Fine Grained Solls (More t			TION, AND STRUCTURE OF SUI	L L
Consistency	Penetrometer R			osf)
Very Soft Soft	<u>≤</u> 0.5		≤ 1000	
Flm	0.5 to 1.0 to 2		1000 to 2000	
Hard	2.0 to 4		2000 to 4000	
Very Hard	> 4.0		4000 to 8000	
			> 8000	
Coarse Grained Solls (Mo	re than 50% Retained on	No. 200 Slev	<b>a</b> )	
Penetration Resistance (Blows / Foot)			Relative Density	
0 to 4	Very Loc		0 to 20%	
4 to 10 10 to 30	Loose Medium Di		20 to 40%	
30 to 50	Dense		40 to 70%	
Over 50	Very Der		70 to 90% 90 to 100%	
			50 (0 100%	
Soil Structure				
Calcareous	Contains apprecia	bie deposi	is of calcium carbonate; generally nodula	•
Slickensided	Having inclined pla	enes of we	akness that ate slick and glossy in appea	rance
Laminated	Composed of thin	layers of v	arying cotor or texture	
Fissured Interbedded	Containing cracks	, sometime	s filled with fine sand or silt	
			rs of different soil types, usually in approx	dimately equal proportions
TERMS DESCRIBING	······································	PERTIES	S OF ROCK	
Hardness and Degree of (				
Very Soft or Plastic	Can be remoided (	n hand; co	rresponds in consistency up to hard in so	ils
Juli	CRU DE SCURICUED	WIID IINGEN	new	
Moderately Hard	Can be scratched	easily with	knife; cannot be scratched with fingernal	1
Hard Very Hard	Difficult to scratch		r_	
Poorly Cemented or Friable	Cannot be scratch Easily crumbled	ed with kni	тв	
Cemented		chemically	r precipitated material; Quartz, calcite, do	lomite, siderite, and iron exide are common cementing
Degree of Weathering				
Jnweathered	Rock in its natural	state before	e being exposed to atmospheric agents	
Slightly Weathered	Noted predominant	to by color	change with no disintegrated zones	
Weathered	Complete color che	nge with a	ones of slightly decomposed rock	
Extremely Weathered	Complete color cha	inge with c	ones of signay decomposed rock onsistency, texture, and general appears	nce aparoachina soil
KEY TO CLASSIFICATION				ning abbingcillig 2011
LI TO CLASSIFICA (10)	H AND STMBOLS	·		PLATE A.27

Phase II RCRA Facility Investigation (JDC, 1998a)

IDC   IDC   Consulting, LLC							
Coordinates:  (1) Sampling pour over the coordinates:  (pour over the coor	& Discrete Soil Sample per Intervals  Sample Descrip	Elev., CL (ft. msl):	Elev., TOC (f	Remarks			
1 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 2 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC(dup), D 3 - CC	CLAY — some gravel (10%), dominto a silty gravel  GRAVELY SILT — gravel & silt (7. 25% clay matrix, loose, of less than 10% matrix, clay clay matrix, clay clay with some well rounded less than 20% pebbles & TOTAL DEPTH = 4' BGL	5%), well graded — damp — 2 loose, damp — calcareous gravel, —					

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#### JD Consulting, LLC

lient: ite:F	GNB T∈	chnole	ogles – Phase I RFI	OF BORING  Job No.: <u>027-01</u> Start Date: <u>6/18</u> ,	/98 McNitt	Boring No.: <u>RRS#2</u> Sheet1 of1 Finish Date: <u>6/18/98</u>			
eologis rilling amplin oordin	Method g Methates:	d; Ge lod: C	Dennis eoprobe ontinuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals	Drill Bit: — Total Depth: 4.6 Elev., GL (ft. msl)	) ft.	Ground Water:  Elev., TOC (ft. msl):			
Method gg	OVM (ppm)	S Cla	Sample Descrip		Depth (ft.)	Bori Comple	ng etion	Remarks	
— А	-		RAILROAD BALLAST GRAVEL – grad	ding into clay	- - - - 1				
			CLAY soft, moist with alternati brownish yellow to gray cold with calcareous gravel (20%,	or (6" bands)	- 2				
			CLAY — soft, moist, black TOTAL DEPTH = 4' BGL	·	- 3				
					- - - - -				
,_				•	-  -7				

Sampling of Completion Sample Description    Sampling of Completion   Sample Description   Sa	Client: <u>GNB Technol</u> Site: <u>Frisco. Texass</u> Geologist: <u>J. Great</u> Drilling Method: Sampling Method: Coordinates: —	- Phase   RFI   Start Date: 6/   Dennis   Driller: ESDI /   Dennis   Driller: ESDI /   Dennis   Driller: ESDI /   Drill Bit: -   Continuous Shelby Tube w/acatale finer & Discrete Soil Sample per Intervals     Elev., CL (ft. m	LOG OF BORING   Boring No.: RRS#3     Job No.: 027-01   Sheet 1 of     Start Date: 6/18/98   Finish Date: 6/18/   Driller: ESDI / M. McNitt     Drill Bit: -   Ground Water:     Shelby Tube w/acatale finer te Soil Sample per intervals   Elev., GL (ft. msl): -   Elev., TOC (ft. msl):					
NR - no recovery    Comparison of the content of th	Method Kill (ft.)  Method Kill (dd.)  MACO Class		1 1	Boring Completion	Remarks			
	- NR - B - B - C - C - D - C - D - C - C - C - C - C	GRAVELY CLAY — firm, dry, gray  SANDY CRAVEL — well graded, angular pebble and granules with less than 10% slity sand matrix, loose, damp  GRAVELY CLAY — with 10% to 30% well rounded pebbles (limey calcareous pebbles), soft, moist, brownish yellow  CLAY — with decreasing gravel (less than 10%) soft, moist, grayish black © TD	3					

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# JD Consulting, LLC 3006 Bee Cave Road - Suite B200 Austin, Texas 78746

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		Boring No.: KK5#4
Client: GNB Technologies	Job No.: 027-01	Sheet1 of1
Site: Frisco, Texas - Phase I RFI		Finish Date: 6/18/98
Geologist: J. Greg Dennis	Driller: ESDI / M. McNitt	
Drilling Method: Geoprobe	Drill Bit:	Ground Water:
Sampling Method: Continuous Shelby Tube w/ocatate liner	Total Depth: 4.0 ft.	
Coordinates: - & Discrete Soll Sample per intervals	Elev., GL (ft. msl):	Elev., TOC (ft. msl):
,		

							<del></del>	
Depth (ft.)	Method gg	OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	I Cor	Boring npletion	Remarks
O De	Me	(22.17)	an	NR — no recovery (railroad ballast @ surface)	Å		<u> </u>	
-				TWN — No recovery (rumodo bundet & surrave)	-  -  -	-		
-					Ł,			
'	С			GRAVELY CLAY — firm , damp, gray  GRAVEL — clean, less than 10% silty sand matrix.		,		
-	D D			GRAVEL — clean, less than 10% silty sand matrix, greater than 90% gravel, angular to sub angular, well graded granules & pebbles, loose, moist	_			
2-				CLAY — soft, with moderate plasticity, with 20% gravel, well rounded pebbles, moist, brownish yellow	_2		-	(
-	·E							
3-					- 3			
_					_			
	F			CLAY — soft, with moderate plasticity, moist, black				
4-			222	TOTAL DEPTH = 4' BGL	-4			
-				·	-			·
5-					- 5			
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_					-			
6—					-6			
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7—					<b>-</b> 7			

Site: <u>Frisco.</u> Geologist: <u>J.</u> Drilling Metho	Technolo Texas - Greg L  od: Ge	Continuous Shelby Tube w/gcolate liner Total Depth: 4.0	3/98 . McNitt 0 ft.	Sh Fir Gr	Finish Date:			
Depth (ft.)	S Cla	Sample Description	Depth (ft.)	B Con	Boring npletion	Remarks		
- NR - 1 - 2 - E - F GG (day), 4	\$\frac{1}{2}\frac{1}{2	R - no recovery  GRAVELY FILL - white, silt (not sampled)  FILL - dark, clay (not sampled)  GRAVELY CLAY - with 20% - 30% calcareous gravel, well rounded pebbles & granules, stiff, light brown  TOTAL DEPTH = 4' BGL	- 1 - 1 - 2 - 3 - 4 - 5 - 6 - 7					

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### JD Consulting, LLC 3006 Bee Cave Road - Stuite B200 Austin, Texas 78746

LOG OF BORING

		Boring No.: SDA#1
Client: CNB Technologies		Sheet1_of1
Site: <u>Frisco, Texas — Phase I RFI</u>	Start Date: 6/18/98	Finish Date: 6/18/98
Geologist: J. Greg Dennis	Driller: ESDI / M. McNitt	
Drilling Method: Geoprobe	Drill Bit:	Ground Water:
Sampling Method: Continuous Shelby Tube w/acatate liner	Total Depth: 4.0 ft.	
Coordinates: & Discrete Soil Sample per intervals	Elev., GL (ft. msl):	Elev., TOC (ft. msl):
1		

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Depth (ft.)		OVM (ppm)	C)	Sample Description	Depth (ft.)	Co <sub>1</sub>	Boring mpletio	n	Remarks	
-	А			CLAY - stiff, dry, black					·	
-	В			CLAYEY SILT — stiff, dry, orange & gray mottled						
1	c				1					1
-					<u> </u>					
2-	D				- 2					
-					<u> </u>					
3-				CLAY — moist, soft, greenish, gray with orange mottling	_ 3		,	. •	;	
~					F "				· -	
	Ε							,		
4-			///	TOTAL DEPTH = 4' BGL	<del>  4</del>		·			
-					_					
5				·	_ 5				·	
6				. •	_ 6			,		
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Site Geol Drill Sam	: <i>Er</i> logist ling ipling	t: <u>J. (</u> Method	chnoicexas Greg L d: Gs	- Phase I RFI         Start Date: 6/18/           Dennis         Driller: ESDI / M.           coprobe         Drill Bit: -           ontinuous Shelby Tube w/ocotate liner         Total Depth: 4.0	'98 McNitt ft.	Sheet Finish Groun	Date:	5/18/98 er:
Depth (ft.)	Method gg	OVM (ppm)	USCS Class	Sample Description	Depth (fl.)	Borin Comple		Remarks
1—————————————————————————————————————	A B C			CLAY — some gravel (less than 20%), stiff, dry, grayish black (upper soil layer)  SILTY CLAY — loose, dry, white to brown  CLAY — with well rounded calcareous gravel, dry, stiff, gray  CLAY — with fine grained gravel, (less than 20% granules), stiff, dry, grayish green	- 1 - 2 - 3 3			
5				TOTAL DEPTH = 4' BGL	5 			

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JDC
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### JD Consulting, LLC 3006 Bee Cave Road - Buite B200

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												В	oring :	No.:_	SDA#3	········
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					: I RFI			Start	Date:	6/18/	14-104	F:	inish I	ate:	6/18/98	
				Dennis eoprobe				Driller						Wate	эŗ;	
Sa	mulin	a Mety Meriio	uiy	Continuous	Shelby Tu	ibe w/ac	atate liner	Total i	Denth:	4.0	ft.	Ч	round	Have		-
	ordina			& Discr	ete Soil So	ımple per	intervals						lev., T	) DC	t. msl):	
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	D d	OVM			Sa	ample	Descrip	tion					Boring npletic	n	Rema	rks
Depth	Method	(ppm)	USCS			•					Depth	001	upremo			
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JDC	JD Consultin 3006 Bee Cave Road - Sui Austin, Texas 78746
Client: GNB Ted	chnologies
	xas — Phase I RFI
Geologist: J. G	
CLEOTORISC	

## JD Consulting, LLC 3006 Bee Cave Road - Suite B200 Austin, Teras 78746

LOG OF BORING

LOG	OF BORING	Boring No.: SDA#4
Site: Frisco, Texas - Phase I RFI		Sheet 1 of 1 Finish Date: 6/18/98
Geologist: J. Greg Dennis  Drilling Method: Geoprobe	D1441 D101 MAINTING	Ground Water:
Sampling Method: Continuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals	Total Depth: 4.0 ft. Elev., GL (ft. msl): —	Elev., TOC (ft. msl):

1 000	rdina	. Lea		Elev., Gr (tc. mai				
Depth (ft.)	71	OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Bor Comp	ing letion	Remarks
1—	A B			CLAY — very loose, dry with 15% gravel (pebbles & cobbles)  CLAY — loose to compact at depth, less than 20% gravel, decrease with depth (poorly graded mostly rounded granules, 5% gravel, very moist, black @ TD	- 1 - 1			
2-	C				- - - - 2 -			
3-	- E				- - - -			
4	E (dup			TOTAL DEPTH = 4' BCL	4			
5-					6			
7					- - - 7			

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II.		Aust chnol		OF BORING  Job No.: 027-01		She	ng No.:_ et1	ofi	
Geologis Drilling	t: <u>J.</u> Metho g Meth	Greg d; G lod: C	Dennis	Driller: <u>ESDI / M. McNitt</u>					
Depth (ft.) Method	OVM (ppm)	USCS Class	Sample Descrip	tion .	Depth (ft.)	Bor Compl		Remark	
- A - B 1 - C C (du) - D 2	1		CLAY — roots, loose, damp, black CLAY — with less than 20% well gravel, compact, highly pl greenish gray ta olive	rounded well graded	- 1 - 1 - 2 - 3				
4-			TOTAL DEPTH = 4' BGL	· · · · · · · · · · · · · · · · · · ·	-4				

Remarks

Site Geo	:Fr	isco, To t: J.	3006 Aust chnolo	Bee Cave Road - Suite B200 In, Texas 78746  LOG OF Degles  - Phase 1 RF1  Dennis  Denn	No.: <u>027-01</u> rt Date: <u>6/18/98</u> ler: <u>ESDI / M. McNit</u>	finish Date:	of! 6/18/98 er:
Depth (ft.)	hod	OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
1	A B C D			CLAY — root zone, loose, dry, black  CLAY — with 10%—30% calcareous well graded gravel (pebbles & gran to dense, domp, greenish gray olive with orange mottling	ules) compact		
5— 				TOTAL DEPTH = 4' BGL	- 4 5 6 7		

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J	$\overline{\mathbb{D}}$	$\overline{\mathbb{C}}$	3006	Consulting, LLC Bee Cave Road - Suite B200 n, Toxas 78746						
تا		NO T-	]	LOG	OF BORING		Bo:	ring No	SDA#7of1	
Site	: Fri	sco. Te	xas -	- Phase I RFI	Start Date: 6/18	No.: 027-01 Sheet I of 1  t Date: 6/18/98 Finish Date: 6/18/98				
Drill	ling 1	Method	l: <u>G</u> ∈	oprobe	Drill Bit:		Gr	ound Wate	PT:	
Sam	ipling rdina	Meth	od: <u>C</u>	ontinuous Shelby Tube w/acatate liner & Discrete Soil Sample per intervals	Elev., GL (it. msl	):	Ele	ev., TOC (	ft. msl):	
(ft.)	San	pling	Jass			(ft.)	R,	oring		
Depth (	Method	OVM (ppm)	uscs a	Sample Descrip	otion	Ďерth	Com	pletion	Remarks	
-	А			CLAY — (upper soil root zane) k	oose, dry, black					
-	. B					-	,			
1-				CLAY — compact, dry, gray to g	proyish green .	1				
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Geologist: J. C Drilling Method	Austonol	— Phase I RFI         Start Date: _6/18           Dennis         Driller: _ESDI / M.           eoprabe         Drill Bit:           Continuous Shelby Tube w/acatate liner         Total Depth: _4.0	/98 McNiti	Sheet Finish Dat	ce: <u>6/18/98</u> ater:
Method Method (mdd)	USCS Class	Sample Description	Depth (ft.)	Boring Completion	Remarks
- NR - NR 1 - NS - S - H - S - H - S - H		NR / FiLL— interval from 0 — 24" contains 12" of recovered fill, not sompled  SILT — calcareous material, laminated rock fragments to loose material recovered, individual layers are cohesive & very stiff, dry, ton, loose material is calcareous silt  TOTAL DEPTH = 4' BGL			

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JDC	JD Co 3006 Bee Ca Austin, Texa
Client: GNB Tec	chnologies

Coordinates: \_\_\_\_

### JD Consulting, LLC 3006 Bee Cave Rond - Suite B200 Austin, Texas 78746

LOG OF BORING

	Boring No.: SDAFF
Client: CNB Technologies	Job No.: 027-01 Sheet 1 of 1
V1, -1, -1	Start Date: 6/18/98 Finish Date: 6/18/98
Geologist: J. Greg Dennis	Driller: ESDI / M. McNitt
Drilling Method: Geoprobe	Drill Bit:Ground Water:
a 2 V 12 - 3 Continuous Shallou Tube w/acatote lines	Total Double 4.0 ft.
Coordinates: & Discrete Soil Sample per intervals	Elev., GL (ft. msl): Elev., TOC (ft. msl):

VOOT MILANDS.									
Depth (ft.).		OVM (ppm)	USCS Class	Sample Description	Depth (ft.)	E Con	Boring npletion		Remarks
	A B			CLAY — soil layer, dry, stiff, black  GRAVELLY CLAY — mixed with angular limestone pebbles, loose, dry, whitish brown	- '	·			
1	c			LIMESTONE layered, loose, layers are hard but brittle, dry, white					
2				TOTAL DEPTH = 18" BCL	- - 2 -		1		(
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#### JD Consulting, LLC

له				Bee Cave Road - Suite E200 in, Texas 78746 LOG	OF BORING				CD4 // 0 . 6		
		NO To	_ b J.	n arlon	Inh No. 027-01		Boring No.: <u>SDA#9-2</u> Sheet1 of1				
Clien	nt:S Fri	SNB Tec sco. Te	xas	– Phase I RFI	Start Date: 6/18	/98	Fini	sh Date	e: <u>6/18/98</u>		
Geo	ogist	; J. C	reg	Dennis	Driller: ESDI / M.	McNitt					
Drill	ing 1	Method	; G	eoprobe	Drill Bit:		Gro	und Wa	ter:		
		Meth tes:		ontinuous Shelby Tube w/acatate line & Discrete Soil Sample per intervals	Total Depth: <u>4.0</u> Elev., GL (ft. msl)	): <u></u>	Elev	., TOC	(ft. msl):		
		т. Т				Tal					
(ft.)	Sam	pling	Class			를	Day	ing			
	pol	оум		Sample Descri	otion	苷		letion	Remarks		
Depth	Method	(ppm)				Depth					
- OI	~		7777			╁╌┼	· · T				
-	A			CLAY — roots, dry, loose, black		<b> </b>					
-											
				SILTY CLAY — stiff, dry, gray		1					
	В										
7				SILTY CLAY - very stiff, loose, o	try, orange to tan	T 1					
_	C			(calcareous material)	•						
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	D			•							
2			Ш			<u> </u>					
\				SILTY CLAY — Same as above, of dry, groyish clay	grades into compact	-					
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#### JD Consulting, LLC

			3006 Anoth	i Bee Cave Road - Suite B200 tin, Taxaa 78746						
	<del></del>		-mst	LOG (	OF BORING		Boring No.: SDA#10			
Clier	1t:	NB Tec	hnole	ogies	Job No.: 027-01	1	Shee	at 1	1ot1	
Site	: Fris	sco, Te:	xas -	– Phase I RFI	Start Date: 6/18	Date: 6/18/98 Finish Date: 6/18/98				
Geol	logist:	. J. G	Greg [	Dennis	Driller: <u>ESDI</u> / A	M. McNitt				
			1 0	Continuous Shallow Tuba w Constate Boar	Drill Bit:			rud Mai	. 130	<u> </u>
Coor	rdinat	es:	-u; <u>L</u>	& Discrete Soil Sample per Intervals	Elev., GL (ft. ms	al);	Elev	., TOC (	(ft. msl):	-
<u> </u>	Sami	pling	g		· · · · · · · · · · · · · · · · · · ·	T:			1	·
(ft.)	—т		Class		h.;	(ft.)	Bori	ing	n .	· •
		MVO		Sample Descript	uon	Depth	Compl	etion	Remark	λŏ
<sup>5</sup> Depth	Met	(ppm)	nscs		<u> </u>	Der				
				CLAY — upper soil layer, soft, dry	4 block	T				
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4			#/	CLAY — compact to loose, dry, br	rownish arav	7		1	,	
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3-			4	SHALEY CLAY — laminated, thiri be	edded offif do	3				
-		1		SHALEY CLAY — laminated, thin be soft, moist, grayish black		+	.  -			
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#### LOG OF TEST BORING JONES & NEUSE B1/LMW-1 BORING NO. End Date: Page 1 Start Date: 2-3-95 **GNB TECHNOLOGIES** 2-3-95 Drilling Method: Project Number: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Geologist: Driller: Drill Rig Type: 6 inches CME-750 BLAKE GILLESPIE E.D.S.I./R. BROTHERS TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: Total Depth: Surface Elevation (ft.): 635.90 N: 1130.5500 638.74 E: 3406.1100 20.00 635.90 **Datum Elevation:** Water Level Depth (ft.): Time: Datum Description: 0832 7/26/95 Site Datum - Elevations ref. from MSL Recovery (Inches) LOCKING COMPRESSION CAP Sample Type Stratigraphy WELL Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD Cement/Bentonite Grout CLAY (CH) - dark brown, organic material, moist, soft. 60 Bentonite Seal 2" ID Schedule 40 PVC Riser 5.0 CLAY (CH) - light brown to gray clay, firm. 60 ₹ tan, plastic, moist with 10% angular chalk clasts. 20-40 Sieve Sand Filter Pack CLAYEY GRAVEL (GC) - tan clay, moist. 60 CLAY (CH) - tan to gray, chalk clasts, saturated. 2" ID 0.010" mill sk PVC screen 60 SHALE - gray, massive, hard. (Eagle Ford Shale)

BORING TERMINATED AT 20 FEET

-20

-23

#F-204B Austin (8-95)

119.5 120.0 Threaded PVC Cap

REV 8/95

### JONES & NEUSE LOG OF TEST BORING BORING NO. B2/LMW-2 End Date: Client: Start Date: Page 1 **GNB TECHNOLOGIES** 2-3-95 2-3-95 Site: Drilling Method: Project Number: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: **BLAKE GELLISPIE** RMT-JN/R.BROTHERS CME-750 6 inches Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.); Site Coordinates: 30.00 638.72 N: 6183.6400 E: 3546.9700 Water Level Depth (ft.): Datum Description: Datum Elevation: 6.18 7/26/95 1045 Site Datum - Elevations ref. from MSL NA Recovery (Inches) Semple Type Stratigraphy OVM (ppm) Depth (feet) LITHOLOGIC DESCRIPTION CLAY (CH) - dark brown, organic material, moist, firm. Cement/Bentonite Grout 2.0 Bentonite Seal 2" ID Schedule 40 PVC Riser light brown and gray. 60 Ī plastic CLAY (CH) - light brown and gray, chalk pebble layers, saturated. 20-40 Sieve Sand Filter Pack 60 CLAYEY GRAVEL (GC) -saturated, 20% angular gravel sized 2" ID 0.010" mill slot PVC screen CLAY (CH) - tan with chalk clasts, grades down to harder gray clay. 60 SAND (SP) - red, medium grained, saturated. SHALE - gray, massive, hard. (Eagle Ford Shale) -20 12 20.5 Thresded PVC Cap -21 BORING TERMINATED AT 21 FEET -22 -23 -24

통-204B Austin (8-95)

### JONES & NEUSE LOG OF TEST BORING **B3/LMW-3** BORING NO. Start Date: End Date: Page 1 of 1 Client: 2-3-95 2-3-95 **GNB TECHNOLOGIES** Drilling Method: Project Number: Site: 50-01584.13 HOLLOW STEM AUGERS FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: 6 Inches RMT-JN/R.BROTHERS CME-750 **BLAKE GILLESPIE** PAD Elevation (ft.): Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): Site Coordinates: 637.76 639,78 637.76 E: 3928.4200 N: 5364.7800 Datum Elevation: Water Level Depth (ft.): Time: Datum Description: 0828 7/26/95 NA Site Datum - Elevations ref. from MSL Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION CONCRETE PAD 60 CLAY (CH) -dark brown, organic, moist, soft. Cement/Bentonite Grout Bentonite Seal 2" ID Schedule 40 PVC Riser CLAY (CH) - tan, plastic, hard, with 10% chalk pebbles in a clay matrix. 60 6.0 Ī 20-40 Sieve Sand Filter Pack gravelly clay, tan, plastic, moist. CLAYEY GRAVEL (GC) - saturated, suspended gravel in a tan clay matrix. 60 2" ID 0.010" mill slo PVC screen CLAY (CH) - gray, iron stained. SHALE - gray, massive, hard. (Eagle Ford Shale) 15.5Threaded PVC Cap 12 -16 **BORING TERMINATED AT 16 FEET** -19 F-204B Austin (8-95) **REV 8/95**

### JONES & NEUSE LOG OF TEST BORING BORING NO. **B4/LMW-4** End Date: Page 1 Client: Start Date: **GNB TECHNOLOGIES** 2-3-95 2-3-95 Drilling Method: Project Number: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: **BLAKE GILLESPIE** RMT-JN/R.BROTHERS CME-750 6 Inches Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: E: 3757.2000 641.42 638.15 N: 5735.6900 Datum Elevation: Water Level Depth (ft.): Datum Description: NA 6.76 7/26/95 1030hre. Site Datum - Elevations ref. from MSL Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, organic material, moist, soft. Cement/Bentonite Grout light brown to gray, grades into a laminated brown clay. 60 2" ID Schedule 40 PVC Riser <u>T</u> Bentonite Seel CLAY (CH) - tan, moderate plasticity, moist, angular chalk 60 12.0 chalk clasts, saturated. 20-40 Sieve Sand Filter Pack tan, plastic, moist. 60 2" ID 0.010" mill slot PVC screen -20 24 SAND (SP) - 1.5 feet thick, red, soft, moist. 21.5 22.0 readed PVC Cap SHALE - gray, massive, hard. (Eagle Ford Shale) -23 **BORING TERMINATED AT 22 FEET** F-204B Austin (8-95) REV 8/95

### LOG OF TEST BORING KMI JONES & NEUSE BORING NO. B5/LMW-5 Start Date: End Date: Page 1 **GNB TECHNOLOGIES** 2-3-95 2-3-95 Drilling Method: Site: Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Borehole Diameter: Driller: Drill Rig Type: Geologist: RMT-JN/R. BROTHERS CME-750 **BLAKE GILLESPIE** 6 Inches Site Coordinates: TOC Elevation (ft.): Total Depth: Surface Elevation (ft.): PAD Elevation (ft.): 22.00 N: 5706.3200 E: 4174.7100 643.27 646.61 643.27 Datum Description: Datum Elevation: Water Level Depth (ft.): Site Datum - Elevations ref. from MSL 7/25/95 10.25 0647hrs. NA Recovery (Inches) Samble Type Depth (feet) Stretigraphy OVM (ppm) Saturation LITHOLOGIC DESCRIPTION CONCRETE PAD CLAY (CH) - dark brown, moist, soft, organic material near surface. 60 Cement/Bentonite Grout 3.0 Bentonite Seal CLAY (CH) - dark tan to brown, hard, 10% chelk clasts. 48 2" ID Schedule 40 PVC Riser 6 GRAVELLY CLAY (CL) - ten, moist. 20-40 Siave Sand Filter Pack CLAY (CH) - ten, hard. 48 CLAYEY GRAVEL (GC) - tan. 24 2" ID 0.01" machine slot PVC screen 16 24 CLAY (CH) - tan, massive soft. 24 20 SHALE - gray, hard, iron stained fractures. (Eagle Ford Shale, weathered) 24 -21 21.5 77 Threeded PVC Cap 22 SHALE - gray, massive, hard. (Eagle Ford Shale) 23 **BORING TERMINATED AT 22 FEET**

**REV 8/95** 

F-204B Austin (8-95)

### LOG OF TEST BORING JONES & NEUSE BORING NO. SB-6 Start Date: End Date: Page 1 **GNB TECHNOLOGIES** 2-4-95 2-4-95 Drilling Method: Site: Project Number FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Borehole Dismeter: Driller: Drill Rig Type: Geologist: BLAKE GILLESPIE RMT-JN/R. BROTHERS CME-750 6 Inches Site Coordinates: Total Depth: Surface Elevation (ft.): TOC Elevation (ft.); PAD Elevation (ft.); E: 4239.9600 21.00 652.79 N: 6171.1200 Datum Description: Datum Elevation: Water Level Depth (ft.): Site Datum - Elevations ref. from MSL NA NA NA NA Recovery (Inches) Sample Type Depth (feet) Stratigraphy OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CLAY (CH) - brown , moderately organic, moist, firm. 24 24 light brown and gray. 24 tan to brown, very firm, massive. 24 CLAY (CH) - tan, firm with horizontal jointing, 1-3" width, jointing coated with red and yellow staining. 48 48 SILTY SAND (SM) - red, medium grained, friable, clay coating on graines. 20 SHALE - gray, massive, hard. (Eagle Ford Shale) -21 **BORING TERMINATED AT 21 FEET** 22 23 24

통F-204B Austin (8-95)

### JONES & NEUSE LOG OF TEST BORING B7/LMW-7 BORING NO. Start Date: End Date: Client: 2-3-95 2-2-95 **GNB TECHNOLOGIES** Project Number: Drilling Method: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Drill Rig Type: Borehole Diameter: Driller: Geologist: CME-750 6 Inches RMT-JN/R. BROTHERS **BLAKE GILLESPIE** TOC Elevation (ft.): PAD Elevation (ft.); Total Depth: Surface Elevation (ft.): Site Coordinates: 659.07 657.45 N: 6574.6800 E: 4322.6900 20.00 Datum Elevation: Water Level Depth (ft.): Datum Description: 7/26/95 1050hrs. Site Datum - Elevations ref. from MSL NA 8.06 Recovery (Inches) Sample Type Dripth (feet) Stratigraphy OVM (ppm) Saturation LITHOLOGIC DESCRIPTION CONCRETE PAD CLAY (CH) - dark brown, soft, moist, organic material near surface. 60 Cement/Bentonite Bentonite Seal 2" ID Schedule 40 PVC Riser light brown to gray, grades to laminated brown clay. 60 20-40 Sieve Sand Filter Pack Y tan, moist with 10% angular chalk clasts. CLAYEY GRAVEL (GC) - tan, decreasing grain size with depth, saturated. 48 2" ID 0.01 inch machine slot PVC Screen CLAY (CH) - tan to gray, <5% chalk pebbles. 36 36 weathered shale, fissile with horizontal jointing, iron 19 -20 SHALE - gray, massive, hard. (Eagle Ford Shale) BORING TERMINATED AT 20 FEET 21 22 1584E 8/23/95 23

REV 8/95

F-2048 Austin (8-95)

-7 <u>041</u>	JONE	S & N	EUSE				BORING NO.	B8/LMW-8
Client:	TECHNO	LOGIES				Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
Site: FRISC	O, TEXA	\s		***************************************		Drilling Method: HOLL	OW STEM AUGER	Project Number: 50-01584.1
Geologist:	KE GILLE	SPIE		iller: 1T-JN/F	R. BROTHERS	Drill Rig Type: CME-	750	Borehole Diemete 6 Inches
Site Coordinates N: 5539.04	•	E: 4	812.01	00	Total Depth: 22.00	Surface Elevation (ft.): 645.57	TOC Elevation (ft.): 648.68	PAD Elevation (ft 645.57
Datum Descripti Site Datum -		s ref. fro	om MSL	•	Datum Elevation: NA	Water Level Depth (ft.): 11.13	Date: 7/26/95	Time: 0630hrs.
Sample Type Recovery (Inches) Seturation	OVM (ppm)	Depth (feet)	Stratigraphy	GI A)		GIC DESCRIPTION	LOCKING COMPRESSION CAP CABING CONCRETE PAD (Surface Sea)	
24 24 60 12 48		1 2 3 3 4 5 6 7 7 8 9 9 10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		peb	DY CLAY (CL) - tan, fi bles size chalk clests. EY GRAVEL (GC) - sa			- Bentonite Seal  - 2" ID Schedule 40 PVC Riser
24 24 24		13 14 15 16 16 17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19		no rec	(CH) - brown, massiv covery (SP) - gray and red, E - gray, hard, massiv	medium grained, moist.	21.	2" ID 0.01 inch machine slot PVC screen

### LOG OF TEST BORING 700 JONES & NEUSE BORING NO. B9/LMW-9 End Date: Client: Page 1 of Start Date: **GNB TECHNOLOGIES** 2-4-95 2-4-95 Site: Drilling Method: Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Borehole Diameter: Geologist: Driller: Drill Rig Type: **BLAKE GILLESPIE** RMT-JN/R. BROTHERS CME-750 6 Inches Site Coordinates: Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): N: 5888.8400 E: 4833.3600 24.00 660.48 663:72 660.48 Datum Elevation: Datum Description: Water Level Depth (ft.): Time: Site Datum - Elevations ref. from MSL NA 18.74ft. 4/24/95 Racovery (Inches) Sample Type Stratigraphy OVM (ppm) Depth (feet) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, soft, friable, organic material near surface, moist, moderately soft. WANTE STATES 12 5.0 Cement/Bentonite Grout 12 24 gray, massive, hard, grading into jointed clay with red and yellow staining. Bentonite Seal 24 2" ID Schedule 40 PVC Riser 9.0 24 20-40 Sieve Sand Filter Pack 24 24 tan to brown, jointed. 2" ID 0.01 inch machine slot PVC Screen gray, massive, jointed, dry. 24 24 24 SHALE - gray, massive, hard. waxy texture, weathered. (Eagle Ford Shale)

**BORING TERMINATED AT 24 FEET** 

F-204B Austin (8-95)

23.5 24.0 Threaded PVC Cep

### JONES & NEUSE LOG OF TEST BORING BORING NO. LMW-10 Client: Stert Date: End Date: Page **GNB TECHNOLOGIES** 2-4-95 2-4-95 Drilling Method: Site; Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Driller: Drill Rig Type: Borehole Diameter: Geologist: BLAKE GILLESPIE RMT-JN/ R.BROTHERS CME-750 6 Inches Total Depth: Surface Elevation (ft.); TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: 683.05 N: 6390.7500 681.03 881.03 E: 4954.0700 18.00 Datum Description: Datum Elevation: Water Level Depth (ft.): 7/26/95 Site Datum - Elevations ref. from MSL NΑ 11.26 1053hrs. Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, soft, friable, organic material near 12 Cement/Bentonite Grout 24 Bentonite Seal tan, firm, massive clay, moist. 24 fractures 1-3" width, moist, yellow and red staining in fractures 2" ID Schedule 40 PVC Riser 36 8.0 gray, two 2" fractures observed filled with sand, iron stained. 20-40 Sieve Sand Filter Pack 24 36 2" ID 0.01 inch machine slot PVC Screen 24 SHALE - massive, very herd. (Eagle Ford Shale) 17.5 18.0 Threaded PVC Cap **BORING TERMINATED AT 18 FEET** 19 **REV 8/95** F-204B Austin (8-95)

# JONES & NEUSE

### LOG OF TEST BORING

BORING NO.

SB-11

	GNB TEC	CHNOLO	GIES			Start Date: 7-19-95	End Dete: 7-19-95	Page 1 of 1
Site:	FRISCO,	TEXAS				Drilling Method: HOLL	OW STEM AUGER	Project Number: 50-01584.13
Geologist:	DAVID	AUDoM	ADE	Driller: E.D.S.I.,	MIKE McNITT	Drill Rig Type: CME	750	Borehole Diameter 6 Inches
Site Coordii N: 638		ı	E: 427	79.5396	Total Depth: 23.00	Surface Elevation (ft.); 655.15	TOC Elevation (ft.): NA	PAD Elevation (ft.)
Datum Desc Site Dat	cription: um - Elev	vations r	ref. from	MSL	Datum Elevetion: NA	Water Level Depth (ft.): NA	Date: NA	Time: NA
Sample Type Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy		LITHOLOGIC DES		
50			- 1 - 2 - 3 - 4		AY (CH) - silty; stiff; pla o dark brown; some sar	astic; olive with gray mottli nd, fine grained, poorly gra	ing; moist; color chang ded, chalk matrix.	ge from 1 ft to 3 ft
60	0404	Annual Control of the	- 5 - 6 - 7 - 8	CLIA	AY (CH) - silty; very stif nanging to gray with ru	if; slightly plastic; olive wit st and yellow mottling; sli	h grøy, rust, and yello ghtly moist, laminated	w mottling;
60			- 6 - 7		AY (CH) - silty; very stif sanging to gray with ru	f; alightly plastic; olive wit st and yellow mottling; sli	h gray, rust, and yello ghtly moist, laminated	w mottling;
60			- 6 - 7 - 8 - 9 -10 -11 -12 -13	traci silty	e weathered shale sand seam, very fine g	grained; some laminated lav ne grained; plastic; stiff; ye d shale, gray, dense, hard	yers of soft, very plast	tic clay; ten.

### LOG OF TEST BORING JONES & NEUSE BORING NO. SB-12 Client: Start Date: End Date: Page **GNB TECHNOLOGIES** 7-19-95 7-19-95 Site: Drilling Method: Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Geologist: Driller: Drill Rig Type: Borehole Diameter: DAVID McQUADE E.D.S.I./MIKE McNITT **CME 750** 6 Inches Site Coordinates: Total Depth: Surface Elevation (ft.): TOC Elevetion (ft.): PAD Elevation (ft.): N: 6472.1875 E: 4300.0402 25.00 656.40 Datum Description: Datum Elevation: Water Level Depth (ft.): Time: Site Datum - Elevations ref. from MSL NA NA NA NA Recovery (inches) Sample Type Depth (feet) Stratigraphy OVM (ppm) LITHOLOGIC DESCRIPTION 60 CLAY (CH) - some sand, fine to medium grained, subrounded, poorly graded, sand is chalk matrix; slightly pleatic; hard; dark brown change to brown at 3 ft.; moist. 60 CLAY (CH) - silty; stiff; plastic; gray with rust and yallow mottling; laminated; moist. 60 60 some weathered shale lenses. 60 SHALE - grey; dense; hard. (Eagle Ford Shale) 23 -25 **BORING TERMINATED AT 25 FEET** 28

**REV 8/95** 

·28 ·29

팅 F-2048 Austin (8-95)

### JONES & NEUSE LOG OF TEST BORING BORING NO. SB-13 Client: End Date: Stert Date: Page 1 **GNB TECHNOLOGIES** 7-19-95 7-19-95 Site: Drilling Method: Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Borehole Diameter: Geologist: Driller: Drill Rig Type: DAVID McQUADE E.D.S.I./MIKE McNITT CME-750 6 inches TOC Elevation (ft.): Site Coordinates: Total Depth: Surface Elevation (ft.): PAD Elevation (ft.): N: 6459.5969 E: 4644.7713 20.00 669.41 NA NA Datum Description: Datum Elevation: Water Level Depth (ft.): Date: Time: Site Datum - Elevations ref. from MSL NA NA Recovery (Inches) Sample Type Depth (feet) Stratigraphy OVM (ppm) Saturation LITHOLOGIC DESCRIPTION CLAY (CH) - sandy, fine grained, poorly graded, subangular, sand is chalk matrix; silty; plastic; stiff; derk brown; moist. CLAY (CH) - silty; plastic; stiff; gray with rust and yellow mottling; laminated; slightly moist. 60 very fine grained sand seam. some weathered shale, becoming more dense. 60 -15 60 SHALE - gray; dense; hard. (Eagle Ford Shale) 19 **BORING TERMINATED AT 20 FEET**

REV 8/95

-24

통 F-204B Austin (8-95)

### JONES & NEUSE LOG OF TEST BORING BORING NO. SB-14 Start Date: End Date: Page 1 7-19-95 **GNB TECHNOLOGIES** 7-19-95 Drilling Method: Project Number: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: DAVID McQUADE E.D.S.I./MIKE McNITT CME-750 6 Inches Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: 14.00 N: 6414.7340 E: 4474.3169 Datum Elevation: Water Level Depth (ft.): Datum Description: 🕏 Site Datum - Elevations ref. from MSL NA NA NA NA Recovery (Inches) Sample Type Stratigraphy OVM (ppm) Depth (feet) LITHOLOGIC DESCRIPTION Saturation CLAY (CH) - silty; slightly plastic; stiff; gray with rust and yellow mottling; laminated; slightly moist. 60 48 SHALE - gray; dense; hard. (Eagle Ford Shale) **BORING TERMINATED AT 14 FEET** 16 -19 **REV 8/95** F-204B Austin (8-95)

## JONES & NEUSE

### LOG OF TEST BORING

BORING NO. SB-15

lient: GN	B TECHNO	LOGIES				Start Date: 7-21-95	End Date: 7-21-95	Page 1 of 1
ite:	SCO, TEX		······································	······································		Drilling Method:	OW STEM AUGER	Project Number: 50-01584.13
eologist:	AVID McC			ller: ).S.I./M	IKE McNITT	Drill Rig Type:		Borehole Diameter
ite Coordinat		E. A.	852.84	41	Total Depth: 26.00	Surface Elevation (ft.): 650.92	TOC Elevation (ft.):	PAD Elevation (ft.)
atum Descri	otion:		***************************************		Datum Elevation:	Water Level Depth (ft.):	Date:	Time:
Site Datum	1 - Elevatio	ns ret. Tro	m MSL		NA	NA NA	NA NA	NA NA
Sample Type Recovery (Inches)	Saturation OVM (ppm)	Depth (feet)	Stratigraphy			LITHOLOGIC DES	CRIPTION	
24		1		CLAY plas	(CH) - sandy, fine to tic; stiff; brown; mo	o medium grained, poorly g ist.	raded, sand is chalk n	natrix; elightly
24	**************************************	2 3 4 5						
24		<b>=</b> 4						
36		6 7		CLAY brov lam	(CH) - trace silt; sor wn mottling; moist a inated.	ne chalk fragments, suban t 7.5 feet; change color to	gular; plastic; hard; bro gray with rust and ye	own with yellowish llow mottling;
24		9 — 10						
36	***************************************	11 12 13					<b>&gt;</b>	
24	***************************************	14 15 16 17 17						
36		17		<b></b>	(DID )		l l at attent	5.4
24		18 19		mot	(CH) - silty; some sa tling; increase sand	and seams, very fine graine content with depth.	d; plastic; stiff; browr	i with gray
		20 21		<b>61.4</b> 1/	(CID Street Lands	-Affi	a kana a sasah da Jama	
36		22 —23		- In	(CH) - silty; plastic; nated.	stiff; some weathered shal	e; prown with dark gr	ey mottling; molet;
24		24 —25		SHAL	E - dark gray; dense;	hard. (Eagle Ford Shale)		
		26			BORING *	TERMINATED AT 26 FEET		
		28						
		E						

### JONES & NEUSE

### LOG OF TEST BORING

BORING NO.

SB-16

Client:	-	GNB TI	ECHNO	LOGIES	3			Start Date: 7-21-95	End Date: 7-21-95	Page 1 of 1			
ite:		-140 11			***************************************			Drilling Method:	1 21.30	Project Number:			
		FRISCO	, TEXA	AS				HOLL	OW STEM AUGER	50-01584.13			
ieolog	gist:	DAVI	D McQ	UADE		riller: .D.S.I./M	IKE McNITT	Drill Rig Type:  CME-750  Borehole Di 6 Inc					
		nates: 5.1147	7	E:	4828.9	834	Total Depth: 24.00	Surface Elevation (ft.); 647.94	TOC Elevation (ft.): NA	PAD Elevation (ft.) NA			
		cription um - El		ns ref. f	rom MS	SL	Datum Elevation: NA	, Water Level Depth (ft.):	Date: NA	Time: NA			
Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy			LITHOLOGIC DES	CRIPTION	,			
	48			1		mat	rix; plastic; hard; da	end, medium grained, suba rk brown; moist; roots. im grained, subangular; slig					
<u>-\</u>	60			3 4 5 6		CLAY	(CH) - sandy, mediu	im to coarse grained, poorl c; stiff; light brown; moist.	v graded, sand is chall	·			
	60			8 9 -10 -11		CLAY mot	(CH) - silty; trace sa tling; moist; increase	and, fine grained; very plest e fine grained sand content	ic; stiff; light brown v with depth.	vith rust and gray			
	60			13 -14 -15 -16		stiff CLAY	; tan with rust mott	ery fine grained sand; plast					
	60			17 18 19 20		very	fine grained sand se	inated; slightly plastic; har eam at 19 feet, gray, wet. om 20.5 to 20.7 ft., wet.	d; gray with rust and y	yellow mottling;			
				21 22 23 24		SHAL	E - dark; dense; hard						
					3	1	DODING 7	FERMINATED AT 24 FEET					

### LOG OF TEST BORING RVII JONES & NEUSE BORING NO. LMW-17 Start Date: End Date: Page 1 Client: **GNB TECHNOLOGIES** 7-21-95 7-24-95 Project Number: Site: Drilling Method: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Borehole Diemeter: Geologist: Driller: Drill Rig Typa: 8 Inches DAVID McQUADE E.D.S.I./MIKE McNITT CME-750 TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: Total Depth: Surface Elevation (ft.): 648.84 646.34 N: 5626.1663 E: 4507.0130 23.00 646.34 Datum Elevation: Water Level Depth (ft.): Date: Time: Datum Description: 7/26/95 0643hrs. Site Datum - Elevations ref. from MSL NA 13.52 Recovery (Inches) Sample Type Stratigraphy OVM (ppm) Depth (feet) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - trace sand, fine grained, poorly graded, subangular, sand is chalk matrix; plastic; hard; very dark brown; moist. 24 Cement/Bentonite Grout 4" ID Schedule 40 PVC Rieer 24 6.0 36 Bentonite Seal 60 10.0 increase sand content, fine to coarse grained; wet. Filter Pack silty sand seam. fine grained 24 4" ID, 0.01 inch slot, PVC screen CLAYEY SAND (SC) - fine to coarse grained, subangular, poorly graded; no plasticity; loose; tan; wet. -16 CLAYEY GRAVEL with send (GC) - fine grained, rounded, poorly graded; loose; tan; wet. 36 18 19 CLAY (CH) - silty; hard; plastic; gray with rust and yellow mottling; moist. 24 20.0 20 sand seam, very fine grained. SHALE - gray; dense; hard. (Eagle Ford Shale)

**BORING TERMINATED AT 23 FEET** 

Sump

**REV 8/95** 

23.0

21

-22

23

-24

24

ਛੋ F-2048 Austin (8-95)

### Tam. Jones & Neuse LOG OF TEST BORING BORING NO. SB-18 Start Date: End Date: Client: of Page 1 7-25-95 7-25-95 **GNB TECHNOLOGIES** Site: Drilling Method: Project Number: HOLLOW STEM AUGER FRISCO, TEXAS 50-01584.13 Borehole Diameter: Driller: Drill Rig Type: Geologist: CME-750 6 Inches E.D.S.I./MIKE McNITT DAVID McQUADE Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: 647.30 N: 5721.6077 E: 4494.9856 24.00 Datum Elevation: Water Level Depth (ft.): Datum Description: Time: Site Datum - Elevations ref. from MSL NA NA NA NΑ Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) Seturation LITHOLOGIC DESCRIPTION CLAY (CH) - silty; plastic; stiff; dark brown; some sand at depth, fine grained, poorly graded, sand is chalk matrix; trace roots from 0-2 feet. 60 CLAY (CH) - trace silt; trace sand, fine grained, subangular, poorly graded, sand is chalk matrix; plastic; stiff; brown; moist; increase sand content with depth, grain size fine to medium; tan. 60 CLAY (CH) - silty; sendy, very fine grained; plastic; soft; tan; wet. CLAYEY GRAVEL with sand (GC) - fine grained; poorly graded; rounded; loose; tan; wet. 60 CLAY (CH) - silty; plastic; stiff; brown with gray and yellow mottling; laminated; increase silt with depth changing to gray with rust and yellow mottling. 60 SHALE - gray; dense; hard. (Eagle Ford Shale)

**BORING TERMINATED AT 24 FEET** 

F-204B Austin (8-95)

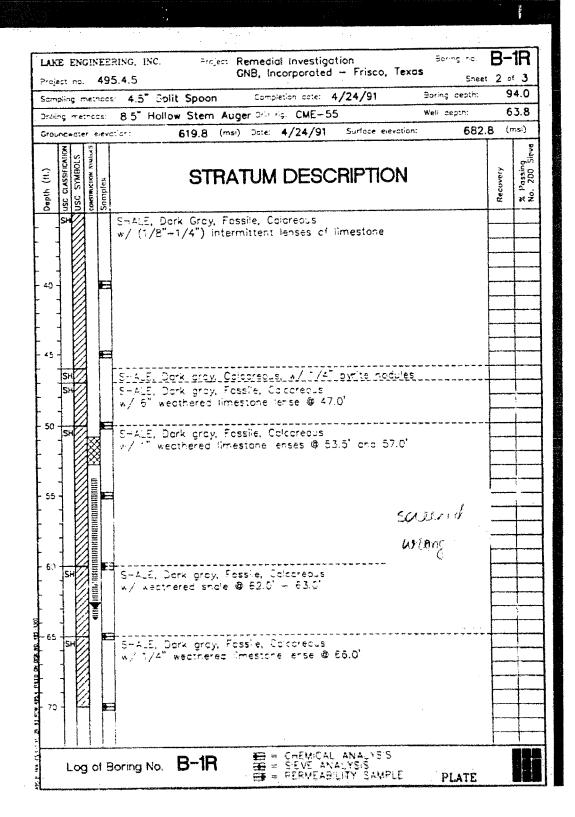
Phase I RCRA Facility Investigation (Lake, 1991; Lake, 1993)

					ds: 4.5" Split Spoon Completion date: 5/8/90 Boring depth		25.
Drilli			,,,,,,		- 3		20.
Grou	<del>,</del>	vot.				.95 (	ms T
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOL	Samples	STRATUM DESCRIPTION	Recovery	9 0 2
5 -	СН				CLAY, dark brown, stiff, with calcerous pebbles, root zone to 5'		
- -	GC		×	•	GRAVEL, clayey, calcerous, wet		
	СН		KX T		CLAY, silty, tan		$\vdash$
10 -	СН			Pt.	CLAY, silty, tan, with calcerous pebbles, moist		<u> </u>
-	СН			•	CLAY, silty, calcareous, with gravel		
15 -	CH			Ē	CLAY, tan, very stiff, with pebbles SHALEY CLAY, gray, orange staining on parting surfaces	-	-
<u>.</u>	SH				SHALE, dark gray, fissile, brittle, yellow staining on parting surfaces, moist, pyrite nodule at 18.5'		
20 <del>-</del> -	SH		*		SHALE, dark gray, fissile, brittle		
25 -					·		
-							
- 30 -		***************************************					
-							
35 ~				•			
1			***************************************			-	-

	<b>LAK</b> Proj				CRING, INC. Project Remedial Investigation 5.4.5 GNB, Incorporated — Frisco, Texas	·	P-2 1 of	1
	ļ				s: 4.5" Split Spoon Completion date: 5/9/90	Boring depth:	22	٥.
	Drilli	ng	met	hods:	8.0" Hollow Stem Auger Drill rig: CME-55	Well depth:	20.	.0
	Grou	ndv			otion: 633.35 (msl) Dote: 7/16/90 Surface elevation:	642.82	(ms	1)
	Depth (ft.)			CONSTRUCTION SYMBOLS Samples	STRATUM DESCRIPTION		overy	% Passing
	- 5	СН	Services of the services of th		CLAY, dark brown, highly plastic, with small calcareaus pebbles			
		СН			CLAY, brown mottled orange, with colcareous pebbles			
		СН		<b>3</b>	CLAY, silty, brownish gray, with calcareous pebbles			
	- 15 - - -	CH			SHALEY CLAY, plastic, moderately fissile, less weathered at depth, selenite crystals found on parting surfaces	,		
	- <b>2</b> 0 -	SH			SHALE, dark gray, fissile, very brittle  LIMESTONE, layer, refusal at 22'			
	- 25 -		***************************************					
	- 30 -							
	- 35 -							
15 P.S.1.2		_0	g o	Bo	ring No. P-2  EB = CHEMICAL ANALYSIS  EB = SIEVE ANALYSIS  EB = PERMEABILITY SAMPLE	PLATE		

	npling m	***************************************	ls: 4.5" Split Spoon Completion date: 6/22/90 Boring depth:	t 1 c	52.0
Dril	ling met	hods:	8.0" Hollow Stem Auger Drill rig: CME-55 Well depth:	5	59.5
Gro	undwatei	r elev	otion; $622.01$ (msl) Date: $7/16/90$ Surface elevation; $679.4$	10 (r	msl)
Depth (ft.)		CONSTRUCTION SYMBOLS Samples	STRATUM DESCRIPTION	Кесочегу	% Passing
· ·			LIMESTONE, (Austin Chalk Group), light brown  CLAY, light brown, moderately dry		
- 5	데	E	SHALEY CLAY, light brown, calcareous, fissile		
	-대를		SHALEY CLAY, dark gray, calcareous, fissile	<b></b>	_
	SH		SHALE, dark gray, sand lense at 10.0'		
- 10 ·	SH	<b>E</b>	SHALE, dark gray, hard, fissile, (refusal at 16', needed drilling method change from auger to mud rotary)		
. 15 -	SH		SHALE, dark gray		
20 -		E	<<< RIG CHANGE TO MOBILE B-53 >>>		
25 -	SH		SHALE, dark gray		
- - 30 - -					
35 -	SH		SHALE, dark gray		
	Log o	l Bo	ring No. B-1N \(\begin{array}{c} \operatorname{\operatorname{B}} = \text{CHEMICAL ANALYSIS} \\ \operatorname{\operatorname{B}} = \text{SIEVE ANALYSIS} \\ \operatorname{\operatorname{B}} = \text{PERMEABILITY SAMPLE}  \text{PLATE} \end{array}		

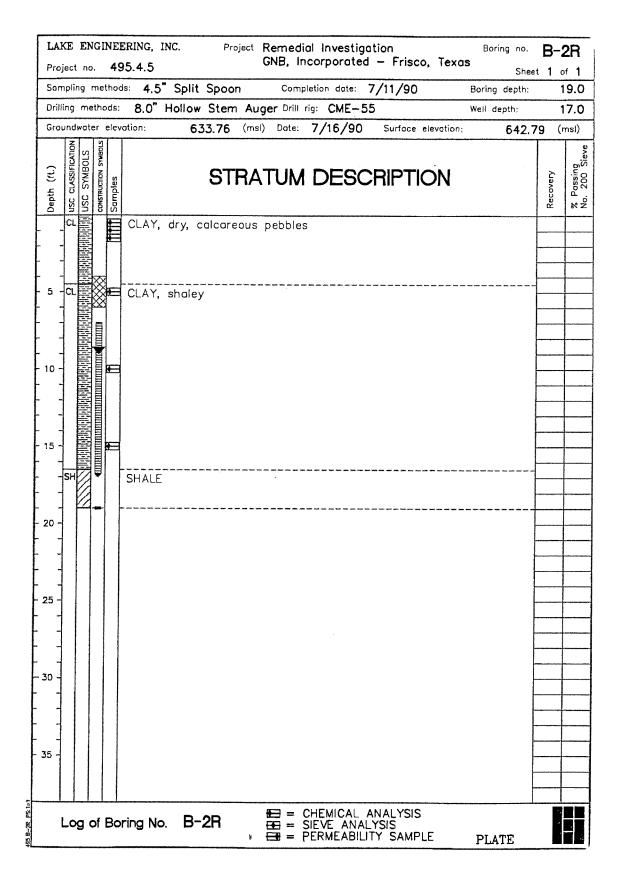
										Spo									/22/	90			ng de			52
							Н	oll					_				OBIL						deptr			59
Gro	ound			elev	atio	n;			62	22.0	1	(msi	) [	Dote:	7	//16	/90	)	Surfa	ce ele	vation	1;	6	79.40	) (	ms
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	5							RA	T	JN	/ I	DE	ES	CF	RIP.	TIC	N		-		Recovery	
- 40	SH									gra gra		n 4860 alla ja					w w .	50d-30ep 40eb	the two too		~ ~~ ~~	···· 300 000 000	· we doe we			
- - - 45	SH			<b>9</b> —4	Sł	HAL	Ξ- .Ε,	da	rk	gra	 у			••••			<b></b>									
- - - 50	LS			<b>:</b>													tal				n: Allin: 1800 Jima.		, ann ann ann ann			
- 55 -	SH			Ħ	SH 56	łAL β',	E, she	do ell	rk fra	gra gm	y, ent	pyri s a	te t 5	noc 7-1	dule 58',	s a , sil	t 55 t Ia	ō', s yer	sand at 5	laye 59'	r at					
60 ·					w 1880° 0000	<b>800</b> 0 340. 1	<b>24.</b> 22. 2	alah Sahan Mala	to deliver addition	66	e dille vene				### 4## (##	00° 0000 0000 de				, and the same and	·	ran tank dalar dan s	inia. ser÷ meti⊙nev			
- <b>6</b> 5			***************************************																							
70 •		***************************************	***************************************																							

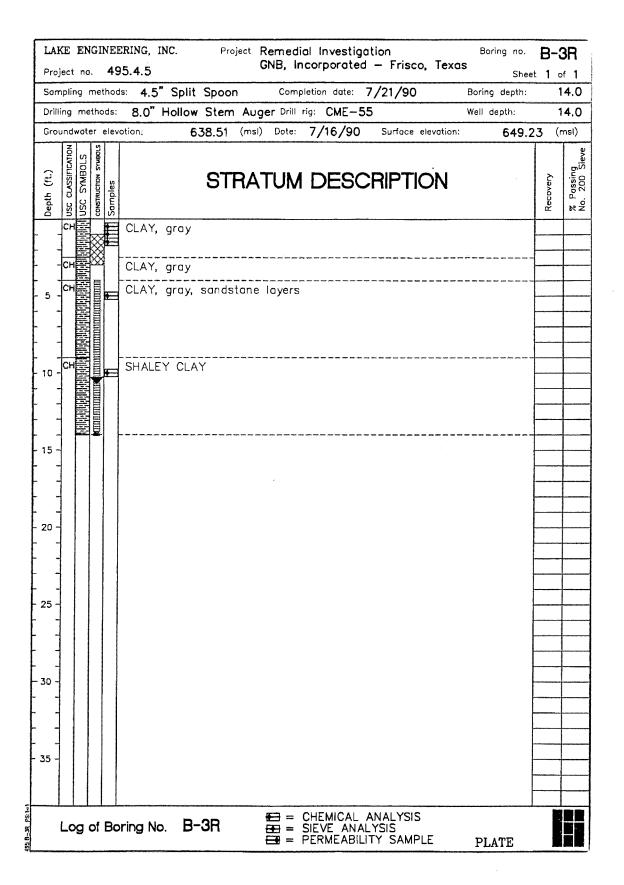


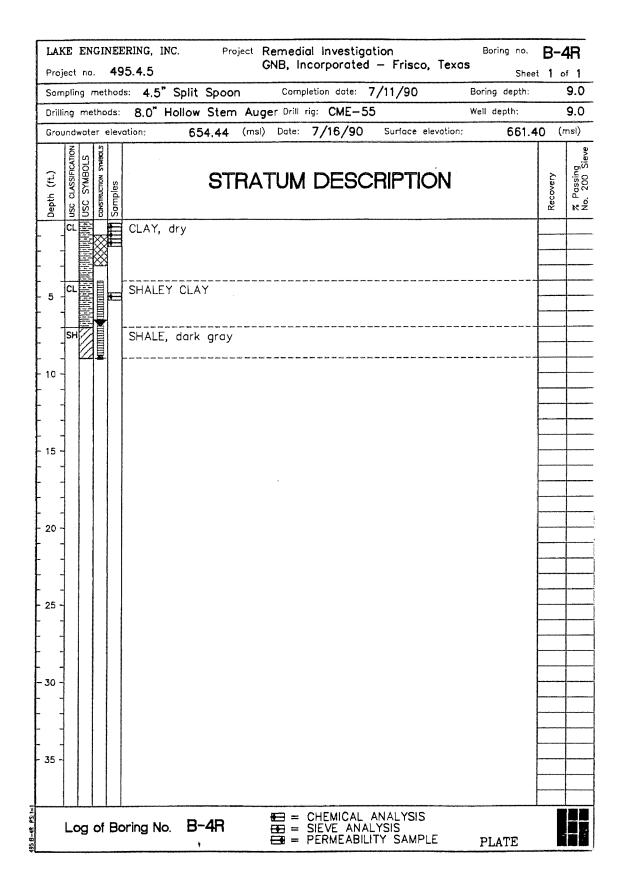
\$am		28.		49	RING, INC Project Remedial Investigation GNB, Incorporated — Frisco, Texas	Boring Inc. Since	۳ <b>۵</b> ۰	·1R
						oring ceptn:	9	4.0
Dritt			-			ell depth:	6	3.8
Grou				evo	ion: 619.8 (msl) Date: 4/24/91 Surface elevation:	682	8 (	ms:)
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SIMILES	Samples	STRATUM DESCRIPTION	•	Recovery	X Passing No. 200 Slave
·	SH				SHALE, Dark gray, Fossile, Calcarebus w/ 5" weathered limestone lense @ 74.5' — 75.0'			
75 -	SH		7		SHALE, Dark gray, Fossile, Calcareous w/ The intermittent limestone lenses from 75.0" — 76.0"			
85 -	SH				SHALE, Dark gray, Fossile, Calcareous			
90	SH				SHALE, Dark gray, Fossile, Calcareous w/ fossils from 85.0' — 37.0'			
95								
100								
4								
-30-					ing No. B-1R = Chemical Analysis = Sieve Analysis = Permeability Sample			

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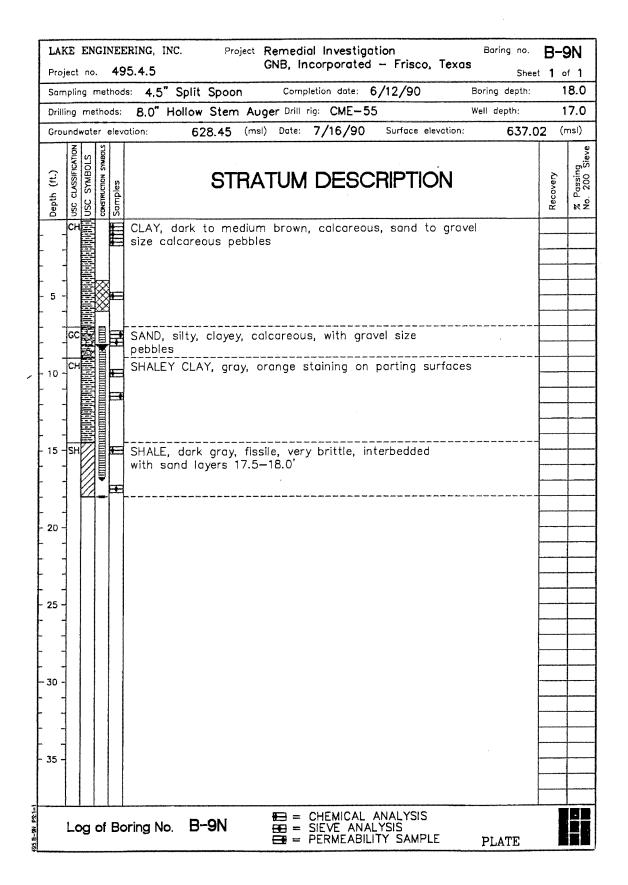




Sampling methods: 4,5" Split Spoon Completion date: 6/7/90	Boring depth:	1
Drilling methods: 8,0" Hollow Stem Auger Drill rig: CME-55  Groundwater elevation: 621.05 (msl) Date: 7/16/90 Surface el	Well depth:  levation: 629.	1 97 (r
	629.	7
USC SYMBOLS CONSTRICTION USC SYMBOLS CONSTRUCTION SYMBOLS SOUNDLES	ON .	Recovery
CHAY, silty, dark brown, colcareous, with sand siz calcareous particles	ze	
CLAY, silty, very soft, moist, blocky  SILT, clayey, sand size calcareous particles		
GRAVEL, dense clay interfill, calcareous, wood fibe sand size calcareous particles at 12.0—13.0'	er and	
SHALEY CLAY, yellow staining on parting surfaces seam of clayey gravel at 19.0'	, 3"	
SHALE, dark gray, fissile, brittle 19.25—19.50'		

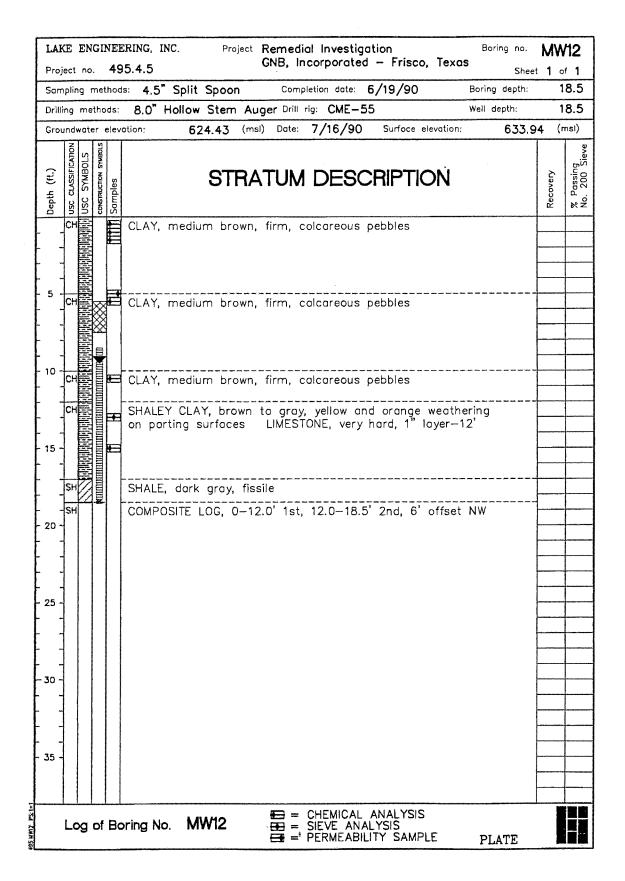
LAI	KE E	NGI	NEE	ERING, INC. Project Remedial Investigation Boring GNB, Incorporated — Frisco, Texas	no. B-	-7N
	ject n			10.4.0	Sheet 1	
		***************************************		is: 4.5" Split Spoon Completion date: 5/10/90 Boring dep		25.0
ļ	ing m					24.0
Gro				ation: 634.66 (msl) Date: 7/16/90 Surface elevation: 64	44.08	(msl)
Depth (ft.)	USC CLASSIFICATION	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve
5				CLAY, dark brown to brown, calcareous, increase in amount and size of calcareous particles at depth		
10 -			Ē	CLAY, gray mottled tan, slightly moist, blocky, with calcareous pebbles		
- ·	CHILLING CHILLING		<b>1</b>	CLAY, gray mottled tan, calcareous, fewer and smaller calcareous particles pebbles than above  SHALEY CLAY, gray, yellow and tan weathering, selenite		
- 15 - 	SH			crystals on parting surfaces  SHALE, dark gray, clayey, moist, very brittle,less brit—		
- 20 - - 20 - 				tle and more fissile at depth, shell fragments 23-25'		
- 25 -			<b>异</b>			
30						
- 35 -						
	Log	ı of	Bo	Pring No. B-7N  ED = CHEMICAL ANALYSIS  ED = SIEVE ANALYSIS  ED = PERMEABILITY SAMPLE PLATE		

					s: 4.5" Split Spoon Completion date: 5/15/90 Boring depth:		20.
					8.0" Hollow Stem Auger Drill rig: CME-55 Well depth:		14.
Gro	<del>-,</del>	vate		elev	ation: 618.89 (msl) Dote: 7/16/90 Surface elevation: 626.9	93 (	msi
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	9 Daning
	СН			IIII	CLAY, dark brown, highly plastic, calcareous, shell fragment at 3'		
5 -	СН			-	CLAY, dark brown, highly plastic, with calcareous pebbles		
10 -	CH			Ħ	SHALEY CLAY, gray, highly plastic, calcareous, light yellow and orange weathering on parting surfaces		
- 01	СН				SHALEY CLAY, gray, yellow weathering on parting surfoces  SHALEY CLAY, dark gray, light yellow staining on parting		
- 15 -	SH			æ	surfaces SHALE, dark gray, fissile, thin sand lenses		
_	SH				SHALE, dark gray, brittle, fissile, very dry		-
20 -	SH			<b>3</b>	SHALE, dark gray, moderately fissile		L
-							
25 -							-
- 30 -							1
-			-				L
35 <i>-</i>							



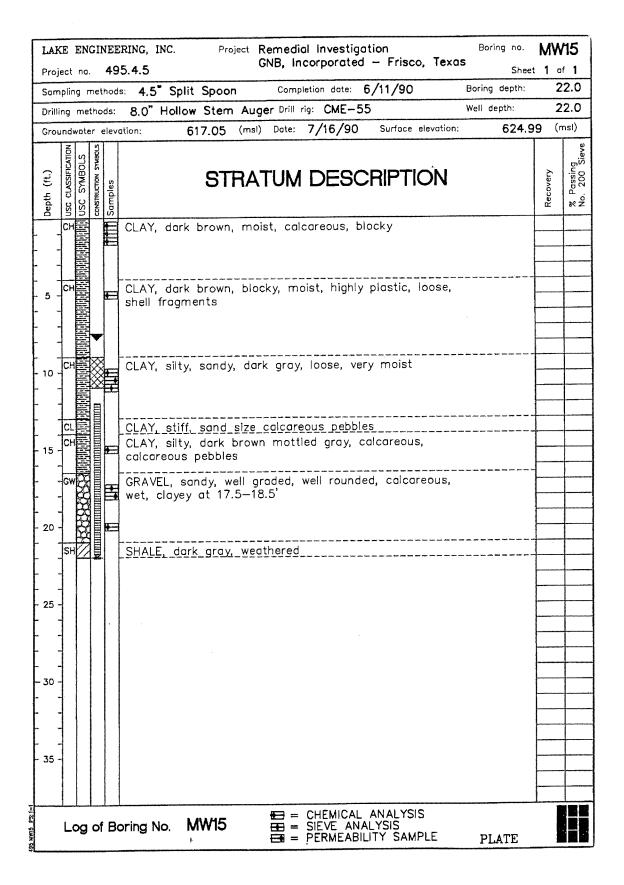
Sar	mplir	ng r	mei	thoc	s: 4.5" Split Spoon Completion date: 6/13/90 Boring depth:	19
Dril	lling	me	the	ds:	8.0" Hollow Stem Auger Drill rig: CME-55 Well depth:	17
Gro	ound	wate	er	elev	otion: $637.95$ (msl) Date: $7/16/90$ Surface elevation: $645.12$	) (ms
Depth (ft.)	USC CLASSIFICATION	nsc	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery
5	CH		×		CLAY, dark to medium brown, with calcareous pebbles	
10	- CH			<b>±</b> 3	CLAY, sandy, brown to brown mottled orange, with calcareous pebbles  CLAY, gray mottled orange—brown, dense, highly plastic	
15	СН			e≡ ≕ŧ	SHALEY CLAY, gray, moist, yellow and orange staining on parting surfaces	
20 -	SH		-	<b>=</b> ;	SHALE, dark gray, fissile, brittle, selenite crystals on parting surfaces	
25 ·				***************************************		
30 -						
- 35 -						

	KE ENGI		RING, II 5.4.5	NC.	Project	Remed GNB,	dial Inve Incorpor	stigat ated	ion – Frisco,		Baring no.	М۷	
	ject no. npling me			Split Sp	oon	Con	npletion do	te: 6	/11/90	Bor	Sheet ing depth:		9.0
<b> </b>	ing metho			Hollow St			······	······		Wel	depth:	1	7.0
Grou	undwater	elevo	otion:	615.7	<b>6</b> (m:	si) Date	7/16,	/90	Surface ele	vation;	625.5	В (г	nsl)
Depth (ft.)	USC CLASSIFICATION USC SYMBOLS CONSTRUCTION SYMBOLS								RIPTIO			Recovery	% Possing No. 200 Sieve
	Ğ		blocky CLAY,	with calc	areou nediur	s pebb m brow	les, she	Il frag	calcareous ment at tic, calca	18.0"			
				larger co	منش خلب شعد نعمه نعمه	· 4000°/4000 (2000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000 - 4000	شنه خفف سنة أشت غض شف ش	·	, and some time and alone shall time an	دلا فقت عمله كام شكة طاهر مما			
- 10 -		日日	CLAY,	light bro	vn to	gray, 1	moist, h	ighly	plastic				
- 15 -	SH		SHALE,	, dark gr	ay, bri	ttle, fis	ssile						
- 20 -													
25 - - -		***************************************											
- 30 - - 30 -													
- 35 -											-  -  -  -		
	Log of	Во	ring No	. MW11	***************************************	<del>- 111 = -</del>	SIEVE	ANAL'	NALYSIS YSIS Y SAMPLE		LATE		

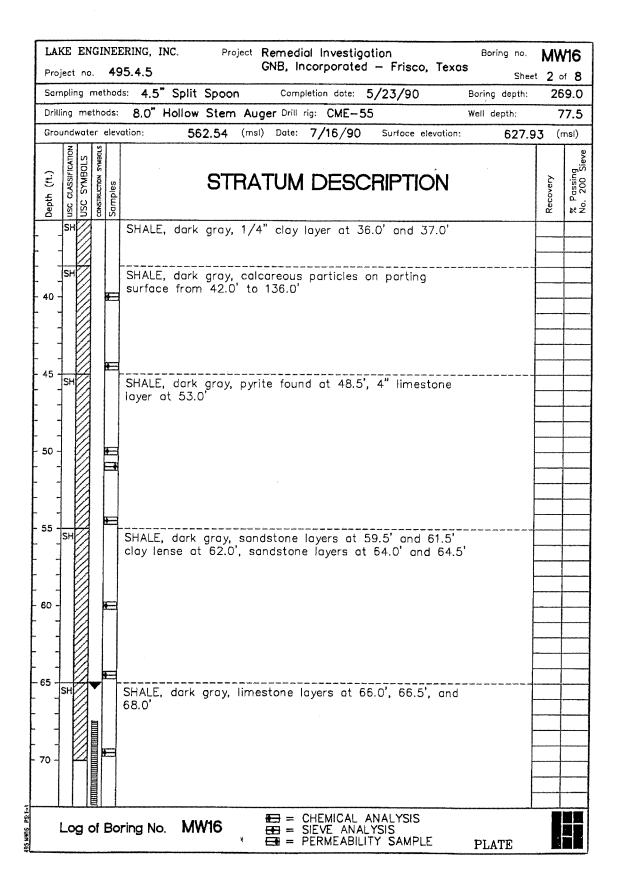


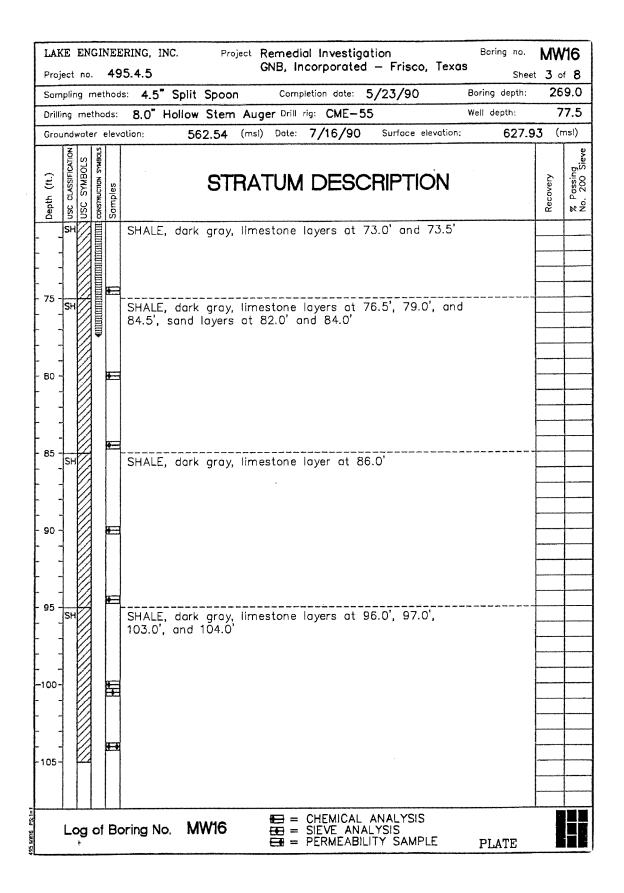
1					ERING, INC. Project Remedial Investigation Bor 95.4.5 GNB, Incorporated — Frisco, Texas	ing no. <b>N</b> Sheet	/W13	
Son	ıplin	ıg m	netl	hod	ls: 4.5" Split Spoon Completion date: 6/18/90 Boring	depth:	25.0	0
Drill	ing	met	hoc	ds:	8.0" Hollow Stem Auger Drill rig: CME-55 Well d	epth:	22.0	0
Gro	und	vate	r e	levo	ation: 620.94 (msl) Dote: 7/16/90 Surface elevation:	636.17	(msl)	)
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION		Kecovery % Passing	No. 200 Sieve
- · ·	CH				CLAY, dark brown, fill  CLAY, dark brown, dense, stiff			
. ×	CL		ı	1	CLAY, moist, loose, blocky			
	СН			ſ	CLAY, dark brown, dense, stiff			
- 10 -	CL			E	CLAY, silty, dark brown, loose, moist, sand loyers 8.0' and 9.0', shell fragments 11.0' and 12.0'			
	СН			<b>*</b>	CLAY, dark brown, calcareous, stiff, no recovery 13.5—			
15 -	Cr				15.0' CLAY, silty, dark brown, calcareous			
	7				CLAT, SIITY, durk brown, coledieous			_
	SC			#	SILT, clayey, brown, calcareous	-	_	
20 -	GM			Ī	GRAVEL, silty, sandy, wet			
	СН				SHALEY CLAY, gray, yellow staining on parting surfaces			
25 -	SH	$\mathbb{Z}_{+}$	-	ŀ	SHALE, dark gray		#	_
-							士	_
-							_	
 - 30								-
- UC		***************************************	l				$\bot$	
-							+	_
_							1	
35 -				***************************************		<u> </u>	1	
- mental	Lo	g c	of I	Во	oring No. MW13  ED = CHEMICAL ANALYSIS  ED = SIEVE ANALYSIS  ED = PERMEABILITY SAMPLE  PLA	ATE		

Pro	ject	no.		49	RING, INC. Project Remedial Investigation Boring no.  5.4.5 GNB, Incorporated — Frisco, Texas  Shee  4.5" Split Spoon Completion date: 6/18/90 Boring depth:	t 1	V14 of 1 20.0
1			***************************************		8.0" Hollow Stern Auger Drill rig: CME-55  Well depth:		17.0
-					tion: 622.77 (msl) Date: 7/16/90 Surface elevation: 629.8		msl)
Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Saldulas	STRATUM DESCRIPTION	Recovery	% Passing
,	무		× ×		CLAY, dark brown, blocky, calcareous, with calcareous pebbles  CLAY, sandy, gravelly, brown, slightly moist, dense,		
- 10 -					stiff		
	СН		<b>E</b>		CLAY, slightly silty, light brown mottled gray, calca— reous pebbles, weathered limestone layers 13' and 13.5'		
- 15 - 	MH CH		B		CLAY, gray mottled brown SILT, clayey, moist SHALEY CLAY, dark gray, dry, brittle, yellow staining on parting surfaces		
- 20 -	SH			-	SHALE, dark gray, brittle, fissile		
  				***************************************			
- 25 <i>-</i> -       - -       -							
- 30 -							
-			***************************************			4	
- <b>3</b> 5 -							
***************************************	Lo	ġ o	f B	or	ing No. MW14		

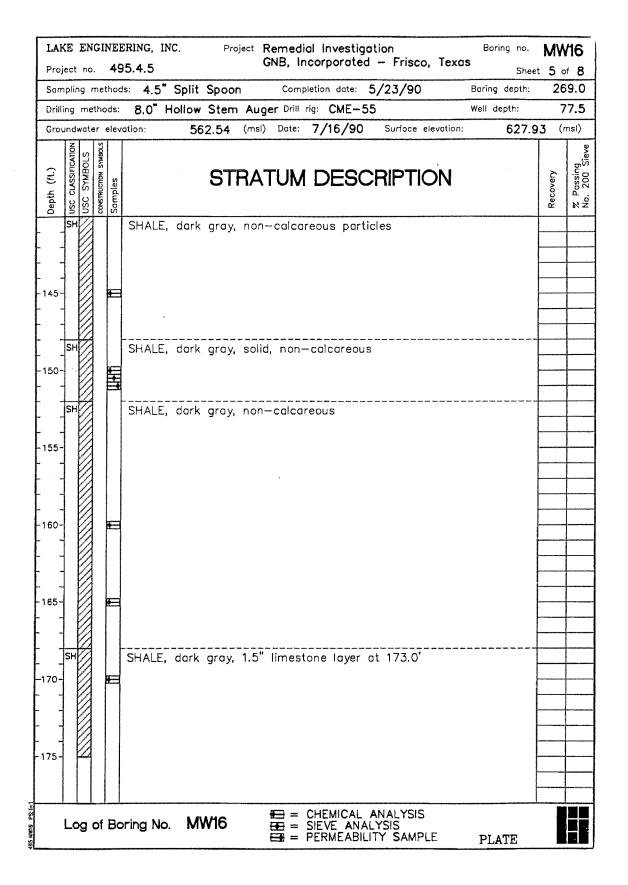


Sampling methods: 4.5" S			Boring depth:	26
Drilling methods: 8,0" Ho	ow Stem Auger Drill rig: CME—		Well depth:	7
Groundwater elevation;	562.5 <b>4</b> (msi) Date: 7/16/90	Surface elevation:	627.93	3 (
Depth (ft.) USC CLASSIFICATION USC SYMBOLS CONSTRUCTION SYMBOLS Samples	STRATUM DESC	CRIPTION		Recovery
CLAY, do	k brown, blocky, calcareous,	calcareous pebble	es .	
	k brown, moist, blocky		Var. Vas and Vas SV att att att var. And And	
	wn, blocky, calcareous pebble	98		
- 15 - CH	dy, silty, gravelly, wet		<u> </u>	
parting s		no 1920, ann. Alea 4420 '882 ann. ann. ann. ann an 1820 ann. an 1820 ann.	100	
SHALE, of brittle, y	ark gray, brittle, fissle, gradin Now weathering on parting su	g to less irface	-	
SHALE, of ((Rig cho	ork gray, shell fragments at 2 nge to Mobile B—53 for rock	28.0' coring))		
- 30 -			region de la constante de la c	
- 35 -				

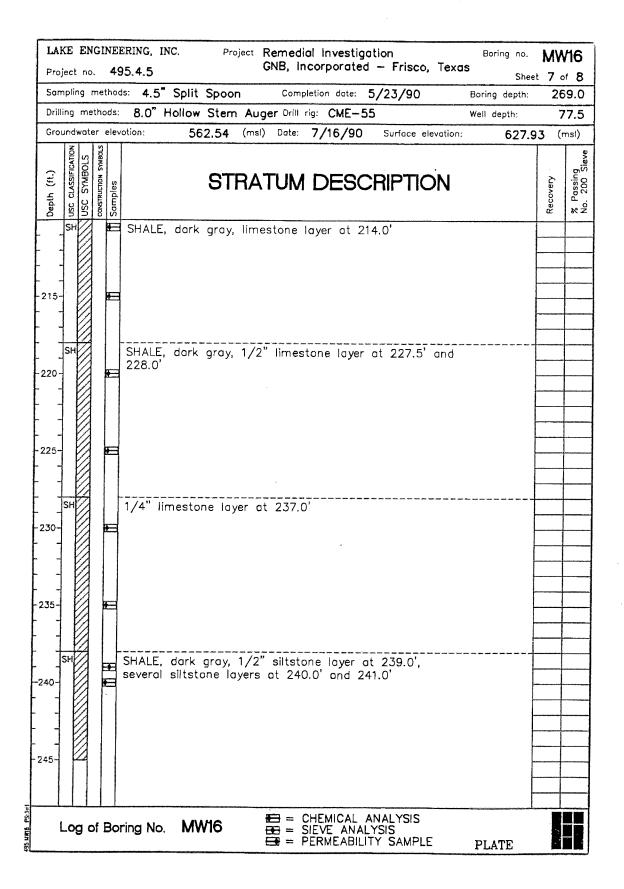


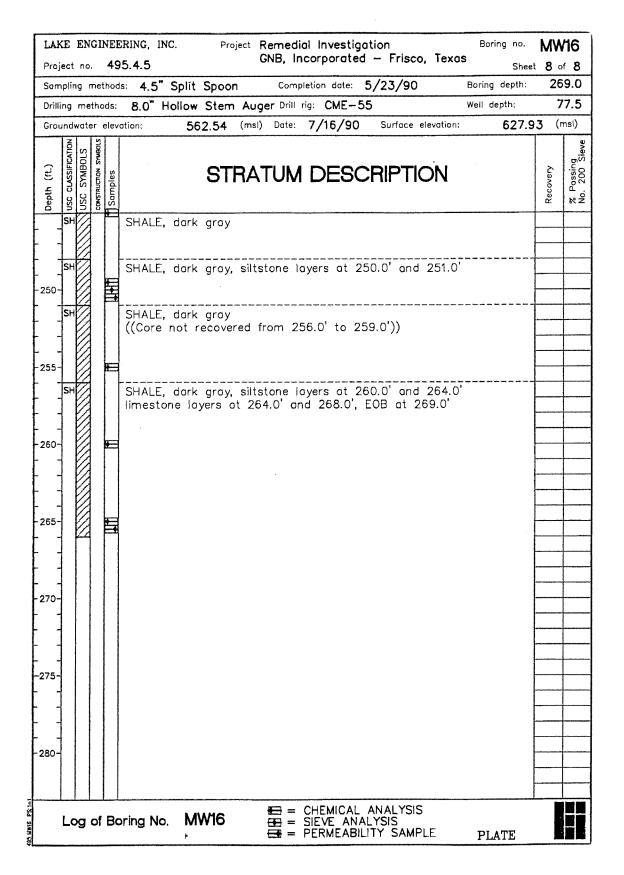


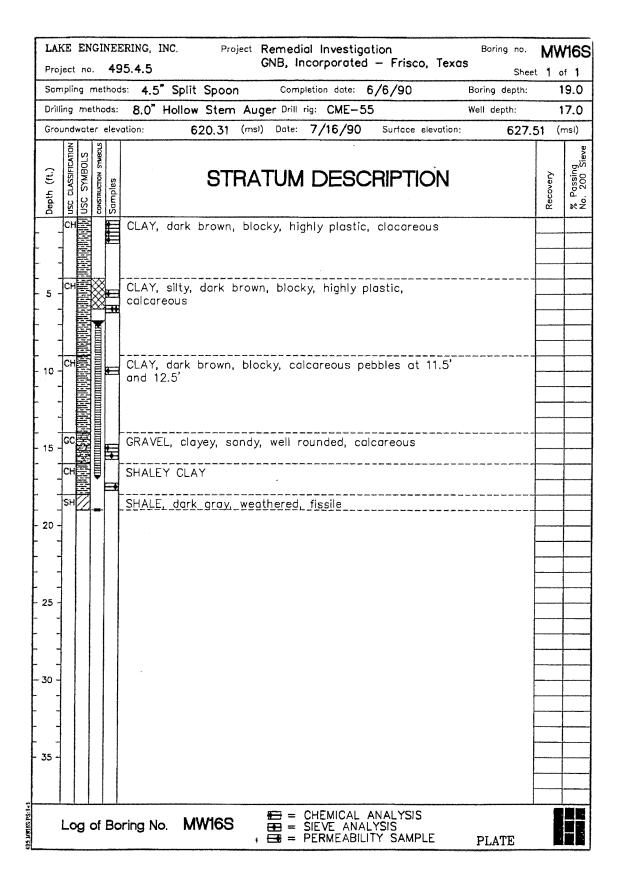
					: 4.5" Split Spoon Completion date: 5/23/90 Boring depth:		9.0 7.5
Drilli					8.0" Hollow Stem Auger Drill rig: CME-55 Well depth: tion: 562.54 (msl) Date: 7/16/90 Surface elevotion: 627.9		nsi)
Depth (ft.)	CLASSIFICATION	OLS	CONSTRUCTION SYMBOLS		STRATUM DESCRIPTION  SHALE, dark gray, limestone layer at 107.0' and 108.0'	Recovery	% Passing
- - - 110-	SH				sandstone layer at 108.75' and 110.0'  SHALE, dark gray, limestone layer		
- - 1 <sub>,</sub> 15- -	돐			Ħ	SHALE, dark gray, limestone layers		
- 120- - -	S			Ħ	SHALE, dark gray, thin limestone layers throughout fossil fragments found in limestone layers		
125-							
130 <i>-</i>	SH				SHALE, dark gray, limestone layers, fractures at 60 at 136.0' and 136.5'		
135- * 140-	SH				SHALE, dark gray, hard, dense, non-calcareous SHALE, dark gray, non-calcareous particles		
140					E = CHEMICAL ANALYSIS		

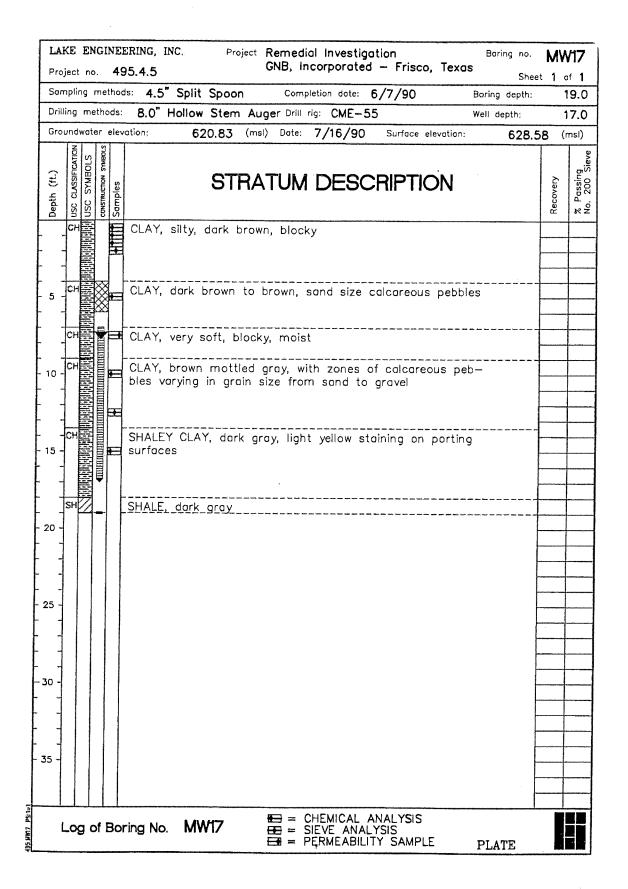


GNB. Incorporated - Frisco, Texas	MW16 6 of 8
Sampling methods: 4.5" Split Spoon Completion date: 5/23/90 Baring depth:	269.0
Drilling methods: 8.0" Hollow Stem Auger Drill rig: CME-55 Well depth:	77.5
Groundwater elevation: 562.54 (msl) Date: 7/16/90 Surface elevation: 627.93	<b>3</b> (msl)
OSC CLASSIFICATION USC CLASSIFICATION SOMPLES	Recovery  Ressing  No. 200 Sieve
SHALE, dark gray, 1" limestone layer at 175.5'	
SHALE, dark gray, 1.5" limestone layer at 182.5'	
SHALE, dark gray	
SHALE, dark gray, limestone layer at 201.0' ((Core not recovered at 193.0' to 198.0'))	
SHALE, dark gray, 6" limestone layer at 204.0', 1" limestone layer at 206.5', 1/4" limestone layer 207.5'	
-205- 	
Log of Boring No. MW16  ED = CHEMICAL ANALYSIS ED = SIEVE ANALYSIS ED = PERMEABILITY SAMPLE PLATE	









	<b>LA</b> K Proj					ERING, INC.  Project Remedial Investigation  GNB, Incorporated — Frisco, Texas  Sheet	MV 1 a			
	Sam	ıplin	g r	neth	100	s: 4.5" Split Spoon Completion date: 6/12/90 Boring depth:		18.0		
	Drilli	ng	me	thod	s;	8.0" Hollow Stem Auger Drill rig: CME-55 Well depth:	1	15.5		
		,,	vate		eve	ation: 626.17 (msl) Date: 7/16/90 Surface elevation: 631.84	1.84 (msi)			
	Depth (ft.)	USC CLASSIFICATION	USC SYMBOLS	CONSTRUCTION SYMBOLS	Samples	STRATUM DESCRIPTION	Recovery	% Passing No. 200 Sieve		
		GC GC				CLAY, dark to light brown, with calcareous pebbles  GRAVEL, clayey, sandy, dense, calcareous				
		СН			3	CLAY, gray mottled orange, moist, very plastic, inter—bedded with light yellow slit laminae				
	- 10 -	СН				SHALEY CLAY, gray mottled orange—brown, some interbedded light yellow silt and iron stained lominae				
	- 15 -	SH				SHALE, dark gray, wet				
-	20 -	***************************************								
	25 -									
-	30 -				***************************************					
	35 -									
195 Um8 PS.14.1	L		10	f B	or	Ting No. MW18  ED = CHEMICAL ANALYSIS  ED = SIEVE ANALYSIS  ED = PERMEABILITY SAMPLE PLATE				

Phase I RCRA Facility Investigation Addendum Disposal Area Boring Description Tables (Lake, 1993)

# TABLE 12-1a Delineation Boring Descriptions North Landfill

Boring	Total	
Number	Depth	Description
NB-1	12'	0-2' clay; 2-4' trash; 4-12' clay; 12' water
NB-2	13'	0-12' trash; 7' water; 13' slag
NB-3	7'	0-2' clay; 2-3' organics; 3-7' clay; 6' water
NB-4	12'	0-12' clay; 12' water
NB-5	12.5'	0-3' clay; 3-12.5' trash; 12.5' slag; 12' water
NB-6	14'	0-2' clay: 2-5' trash; 5-14' clay; 14' slag; 7' water
NB-7	10'	0-2' clay; 2-3' trash; 3-10' clay; 10' water
NB-8	14'	()-3' clay; 3-6' trash; 6-14' clay; 14' slag; 12' water
NB-9	10'	0-2" play; 2-3" trash; 3-10" clay; 10" water
NB-10	7'	0.7° clay: 7° water
NB-11	10'	0.2' clay; 2-8' trash; 8-10' clay; 10' water
NB-12	8'	0-2' clay; 2-3' trash; 3-8' clay; 8' water
NB-13	5'	0-1' clay; 1-5' trash; 2-3' slag; 5' water
NB-14	8'	0-2' clay; 2-3' organics; 3-8' clay; 8' water
NB-15	4'	0-3' clay; 3-4' trash/organics: 4' water
NB-16	14'	0-3' clay; 3-4' trash; 4-14' clay; 14' slag; 4-5' water
NB-17	14.51	0-3' clay; 3-14.5' trash; 14.5' slag; 4' water
NB-18	5'	0-2' clay; 2-5' trash/organics; 5' water
NB-19	151	0-3' clay; 3-15' slag/organics; 15' slag; 7' water
NB-20	14'	0-3' clay; 3-14' trash; 14' slag; 7' water
NB-21	20,	0-3' clay; 3-20' trash; 20' clay; 4' water
NB-22	8'	0-2' clay; 2-8' trash; 8' water
NB-23	20'	0-3' clay; 3-9' trash/organics; 9-20' clay; 14' water
NB-24	9'	0-0.5' clay; 0.5-2.5' rubber; 9' carpet; 5' water
NB-25	13'	0-3' clay; 3-12' trash/organics; 13' slag; 8' water
NB-26	20'	0-2' clay; 2-3' trash; 3-20' clay; 14' water
NB-27	10'	0-0.5' clay; 0.5'-1' rubber; 1-10' clay; 10' water
NB-28	11'	0-1' clay; 1-5' slag; 5-10' trash; 11' slag

# TABLE 12-1a (Continued) Delineation Boring Descriptions North Landfill

Boring Number	Total Depth	Description							
NB-29	6'	C-4' clay; 4-6' trash; 6' water							
NB-30	10'	1' clay; 4-10' wire							
NB-31	7'	0 7' clay; 7' water							
NB-32	8'	0-2' clay; 2-8' trash; 8' water							
NB-33	12'	0-4' clay; 4-12' trash; 10' water							
NB-34	9'	0-3' clay; 3-8' trash; 9' water							
NB-35	12'	0-3' clay; 3-12' trash							
NB-36	6'	0-6' clay; 6' water							
NB-37	6'	0-2' clay; 2-3' trash; 3-6' clay; 6' water							
NB-38	10'	0-4' clay; 4-6' trash; 10' water							
NB-39	12'	0-4' clay; 4-12' trash/organics							
NB-40	4'	0-4' clay; 4' trash/rubber							
NB-41	10'	0-3' clay; 3-4' organics; 4-10' clay; 10' water							
NB-42	10'	0-2' clay; 2-3' trash; 3-10' clay; 10' water							
NB-43	12	0-1' clay; 1-2' trash; 2-10' clay; 10-12' sand; 10' water							
NB-44	6'	0-6' clay							
NB-45	2'	0-2' clay; 2' trash							
NB-46	5'	0-5' clay; 5' trash							
NB-47	2'	0-1' clay; 1-2' slag							
NB-48	2'	U-1' clay; 1-2' slag							
NB-49	3'	0-2' clay; 2-3' slag							
NB-50	1'	0-0.5' clay; 0.5-1' slag							
NB-51	3'	0-2' clay; 2-3' slag/rubber							
NB-52	3'	0-2' clay; 2-3' slag							
NB-53	3'	0-2.5' clay; 2.5-3' slag/rubber							
NB-54	7'	0-7' clay; 7-8' trash							

495-95-TABLE (2-1A

TABLE 12-3a Delineation Boring Descriptions South Landfill

Boring Number	Total Depth	Description
SB-1	8,	0-2' clay; 2-8' slag/rubber; 8' shale
SB-2	6'	0-6' clay
SB-3	2'	0-1' clay; 1-2' slag
SB-4	6'	0-6' clay
SB-5	41	0-3' clay; 3-4' slag
SB-6	10'	0-10' clay
SB-7	3'	0-2' clay; 2-3' slag
SB-8	10'	0-10' clay
SB-9	10'	0-10' clay
SB-10	10'	0 10' clay
SB-II	4'	0-5' clay; 3-4' slag
SB-12	10'	C-10' clay
SB-13	10'	0-10' clay
SB-14	10'	0-10' clay
SB-15	4'	0-3' clay; 3-4' slag
SB-16	6'	0-6' clay
SB-17	6'	0-6' clay
SB-18	3'	0-3' clay
SB-19	4'	0-3' clay; 3-4' slag
SB-20	10'	0-10' clay
SB-21	10	0-10' clay
SB-22	10'	0-10' clay
SB-23	4'	0-3' clay; 3-4' slag
SB-24	4'	0-3' clay; 3-4' slag
SB-25	10'	0-10' clay
SB-26	3'	0-2' clay; 2-3' slag
SB-27	41	0-3' clay; 3-4' slag

## Golder ssociates

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06D

DATE 6/11/2015

LOCATION Class 2 Landfill DRILLER SCI, Vincent Burnham TIME \_1125

NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES DESCRIPTION AND COMMENTS (ppm) 0.0-2.0 FT, (ML) CLAYEY SILT with trace gravel, organic material; brown; loose, very dry, hard. 0.0-0.5 (1140) 0.5-2.0 (1140) 3.4 4.0 1 N/A 2.0-4.0 FT, (CH) CLAY, trace gravel; dark brown, dry, stiff. 2.0-4.0 (1140) End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	Class 2 Landfill	REVIEWED BY	JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06E Golder ssociates DATE 6/08/2015 LOCATION Class 2 Landfill DRILLER SCI, Vincent Burnham TIME \_1435 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0.0-2.0 FT, (ML) CLAYEY SILT with some gravel, loose, organic material; brown; 0.0-0.5 (1445) very dry, hard. 0.5-2.0 (1445) <u>2.6</u> 4.0 N/A 2.0-4.0 FT, (CH) CLAY; brown, trace gravel; dry, firm. 2.0-4.0 (1445) End of borehole at 4 FT BGS - 5 - 10

 PROJECT No
 130-2086
 LOGGED BY
 AM

 PROJECT
 Exide Frisco
 CHECKED BY
 JX

 LOCATION
 Class 2 Landfill
 REVIEWED BY
 JW

<del>-</del> 15

	Golder Associates		LO	G OF DIRI	ECT PUSH BOREHO	DREHOLE BOREHOLE 2015-C2L-06F		
							DATE 6/08/2015	
	N Class 2 I				LER SCI, Vincent Burnham		1E <u>1440</u>	
		4 FT BGS		_ RIG_	Geoprobe	NO.	. SAMPLES_3	<del></del>
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESC	RIPTION AND CO	OMMENTS	
-				0.0-0.5 (1500) 0.5-2.0 (1500)	0.25-1.0 FT, (CL) SILTY CLA organics; brown; dry, stiff.	Y, some fine-med	lium grain gravel (<10%	dry. );
-	1	N/A	3.92 4.0					
-				2.0-4.0 (1500)				
·					End of borehole at 4 FT BGS	i		
- 5								
- 15								
-								
-								
-								
PRC	JECT No_	130-2086	3		LO	GGED BY	AM	
PRC	JECT _	Exide Fri	sco		CH	ECKED BY	JX	

REVIEWED BY JW

LOCATION Class 2 Landfill

## 

	Golder Ssociates		LO	G OF DIRE	ECT PUSH BORE	HOLE BORI	EHOLE_	OLE <u>2015-C2L-06G</u> TE <u>07/29/2015</u>		
LOCATIO	ON_ Class 2 I			DDII	LED COLVincent Dumb					
		4 FT BGS			LER SCI, Vincent Burnh	am	TIME _ NO. SAM			
DEPTH		PID		_ KIG_	Geoprobe		IVO. OAW	LLO <u>. 0</u>	-	
(Feet)	RUN NO.	(ppm)	RECOVERY			SCRIPTION ANI				
				0.0-0.5 (0745)	0.0-1.0 FT, (CH) CLAY wi	th some slit; dark	c brown, w	nite motteling; ary.		
				0.5-2.0 (0745)	1.0-2.5 FT, (CH) CLAY; da	ark brown/black;	dry, very s	stiff.		
			3.95	0.0 2.0 (0740)						
	1	N/A	3.95 4.0		1.0 FT, area of gypsum de					
				2.0-4.0 (0745)	2.5-4.0 FT, (CH) CLAY an	nd GRAVEL; dark	c brown/bla	ack; dry, very stiff.		
. [					End of borehole at 4 FT B	GS				
_										
-5										
- 10										
•										
'										
- 15										
PRC	DJECT No_	130-2086	3			LOGGED BY	A	М		
PRC	DJECT _	Exide Fris	sco			CHECKED B	Y <u>E</u>	PW		

130-2086			LOGGED BY	AM
Exide Frisco			CHECKED BY	EPW
Class 2 Landfill			REVIEWED BY	JW
		SHEET 1 of 1		
	Exide Frisco	Exide Frisco	Exide Frisco Class 2 Landfill	Exide Frisco CHECKED BY  Class 2 Landfill REVIEWED BY

## Golder Ssociates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06H

DATE 07/29/2015 TIME \_0721 LOCATION Class 2 Landfill DRILLER SCI, Vincent Burnham

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

IOTAL	L DEPTH_	4 FT BGS		RIG_	Geoprobe NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	N/A	<u>4.0</u> 4.0	0.5-1.0 (0730) 1.0-2.5 (0734) 2.5-4.0 (0737)	
_ _5					End of borehole at 4 FT BGS
-					
_ _ 10					
-					
_ _ 15 _					
-					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Class 2 Landfill	REVIEWED BY	JW

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2I-06J

<b>Associates</b>		DATE <u>07/29/2015</u>
LOCATION Class 2 Landfill	DRILLER SCI, Vincent Burnham	TIME _0752
TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

10171	- DLI III	<del>+111000</del>		_ '\\\_	<u>Geoplobe</u>
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0800)	
				1	
-				0.5-2.0 (0803)	
				2.0 2.0 (0000)	
-	1	N/A	3.0 4.0		
-				2.0-4.0 (0805)	
					3.5-4.0 FT, (CLG) CLAY and GRAVEL; tan; dry, firm.
-					End of borehole at 4 FT BGS
-5					
-					
-					
-					
-					
<del>-</del> 10					
_					
_					
_ 15					
<del>-</del> 15					
_					
-					
-					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Class 2 Landfill	REVIEWED BY	JW

## Golder ssociates

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-06K DATE <u>07/29/2015</u> LOCATION Class 2 Landfill DRILLER SCI, Vincent Burnham TIME \_0757 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe DEPTH (Feet) RUN NO. PID RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0.0-3.5 FT, (CL/MLG) CLAY, GRAVEL and SILT; brown; very dry, loose. 0.0-0.5 (0825) 0.5-1.0 FT, (CL/MLG) CLAY, GRAVEL and SILT; brown; dry, loose. 1.0-4.0 FT, (CL/MLS) GRAVEL, CLAY, and SAND; brown; slightly moist, firm. 0.5-2.0 (0827 <u>2.0</u> 4.0 1 N/A 2.0-4.0 (0850) End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No	130-2086	<u> </u>			LOGGED BY	AM
PROJECT _	Exide Frisco				CHECKED BY	EPW
LOCATION	Class 2 Landfill				REVIEWED BY	JW
				SHEET 1 of 1		



LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-C2L-C01D Golder ssociates DATE <u>6/11/2015</u> LOCATION Class 2 Landfill DRILLER SCI, Vincent Burnham TIME \_1527 NO. SAMPLES 2 TOTAL DEPTH 1 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0-1.0 FT, (CH) CLAY with some gravel; brown with orange mottling; dry, stiff. 0.0-0.5 (1535) <u>1</u> 1.0 1 N/A 0.5-1.0 (1535) End of borehole at 1 FT BGS - 5 - 10 <del>-</del> 15 130-2086 PROJECT No LOGGED BY AM

**PROJECT** Exide Frisco **CHECKED BY** JX LOCATION Class 2 Landfill **REVIEWED BY** JW SHEET 1 of 1

## Golder

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-15A

DATE 6/08/2015

 LOCATION \_ Crystallizer Area
 DRILLER \_ SCI, Vincent Burnham
 TIME \_ 0955

 TOTAL DEPTH \_ 6 FT BGS
 RIG \_ Geoprobe
 NO. SAMPLES\_4

IOIA	L DEPTH_	6 FT BGS		RIG_	Geoprobe	NO. SAMPLES_4
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES		DESCRIPTION AND COMMENTS
	1	N/A	<u>3</u> 4.0	0.0-0.5 (1000) 0.5-2.0 (1000) 2.0-4.0 (1000)		dark brown, light brown, orange, & black mottling; dry,
-5	2	N/A	<u>2</u> 2.0	4.0-6.0 (1000)		
					End of borehole at 6 F	T BGS
- 10						
-						
-						
-						
-						
<del>-</del> 15						
-						
-						
-						
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION _	Crystallizer Area	REVIEWED BY	JW

## Golder Ssociates

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

DATE 6/08/2015 TIME \_0915 LOCATION Crystallizer Area DRILLER SCI, Vincent Burnham TOTAL DEPTH 6 FT BGS NO. SAMPLES 4 RIG Geoprobe

10171	- DLI III	011000		_ 1110_	Ocoprobe 220
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0925)	0-0.5 FT, (CL) SILTY CLAY, some gravel (<5%); brown; dry, firm.
-	1	N/A	<u>3</u> 4.0	0.5-2.0 (0925) 2.0-4.0 (0925)	0.5-4.5 FT, (CL) SILTY CLAY, some fine-medium grain gravel (<10%); organics; brown; dry, stiff.
-5	2	N/A	1.8 2.0	4.0-6.0 (0925)	4.5-5.0 FT, (GC/ML) CLAYEY GRAVEL and some SILT;brown, dry, hard.
	2	IN/A	2.0	4.0-6.0 (0925)	5.0-6.0 FT, (CH) CLAY; dark brown, orange motteling; dry, firm.
-					End of borehole at 6 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Crystallizer Area	REVIEWED BY	JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-16B Golder Ssociates DATE 6/08/2015 LOCATION Crystallizer Area TIME \_0945 DRILLER SCI, Vincent Burnham TOTAL DEPTH 6 FT BGS NO. SAMPLES 4  $RIG_{-}$ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** 0-6.0 FT, (CH) CLAY, dark brown; dry, firm. 0.0-0.5 (0950) 0.5-2.0 (0950) 3.2 4.0 1 N/A 2.0-4.0 (0950) <u>1.7</u> 2.0 -5 2 N/A 4.0-6.0 (0950) End of borehole at 6 FT BGS - 10 <del>-</del> 15

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	Crystallizer Area	REVIEWED BY	JW

## Golder Associates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-CUFT-16C

DATE 6/08/2015 TIME \_1352 LOCATION Crystallizer Area DRILLER SCI, Vincent Burnham TOTAL DEPTH 6 FT BGS RIG Geoprobe NO. SAMPLES 2

DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
(1 661)		(μμιιι)	NEGOVERT	OAWII LLO	0-0.5 FT, (CL) SILTY CLAY; brown; very dry, hard.
-	1	N/A	<u>3</u> 4.0	2.0-4.0 (1355)	0.5-6.0 FT, (CL) SILTY CLAY, dark brown; dry, firm.
-5	2	N/A	<u>1.4</u> 2.0	4.0-6.0 (1357)	
-					End of borehole at 6 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Crystallizer Area	REVIEWED BY	JW

	Golder Ssociates		LOC	G OF DIRE	ECT PUSH BORE	HOLE BOREHO	LE 2015-CUFT	-16D
	Associates					DAT	TE <u>07/27/2015</u>	
LOCATIO	N <u>Crystalliz</u>	zer Area		DRIL	LLER SCI, Vincent Burnha		E <u>0951</u>	
TOTAL	DEPTH_	4 FT BGS		_ RIG_	Geoprobe	NO.	SAMPLES 4	
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DE:	SCRIPTION AND CO	MMENTS	
				0.0-0.5 (0958)				
				0.5.0.0 (4.000)				
				0.5-2.0 (1000)				
	1	N/A	4.0 4.0					
				2.0-4.0 (1003)				
-5	2	N/A	<u>2.0</u> 2.0	4.0-6.0 (1005)				
	-	1071	2.0	1.0 0.0 (1000)				
					End of borehole at 6 FT B	GS		
- 10								
- 15								
PRC	DJECT No_	130-2086	3		I	LOGGED BY	AM	
PRO	JECT _	Exide Fris	sco			CHECKED BY _	EPW	
LOC	ATION	Crystalliz	er Area		i	REVIEWED BY	JW	

## Golder

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

DATE 6/11/2015

LOCATION	Former Fire Fighter Training Area	DRILLER	SCI, Vincent Burnham	TIME	1020	

TOTAL DEPTH 4 FT BGS NO. SAMPLES 3 RIG Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** 0-1.0 FT, (CL) SILTY CLAY, some gravel; organics; brown; moist, soft. 0.0-0.5 (1035) 1.0-3.0 FT, (CHG) CLAY and GRAVEL; tan/brown with orange and grey mottling; dry, stiff. 0.5-2.0 (1035) <u>4</u> 4.0 1 N/A 2.0-4.0 (1035) 3.0-4.0 FT, (CH) CLAY; tan/orange with grey mottling; dry, stiff. End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Former Fire Fighter Training Area	REVIEWED BY	JW

#### Golder Associates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-MW-17C

DATE 6/10/2015

OCATION	Stewart Creek Corridor	DRILLER	SCI, Vincent Burnham	TIME	1243	
_						

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

IOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1305)	0-4.0 FT, (CL) SILTY CLAY; dark brown, organics and ferrous nodules; dry, stiff, hard.
_				0.5-2.0 (1305)	
_	1	N/A	<u>2.8</u> 4.0		
				2.0-4.0 (1305)	
_					End of borehole at 4 FT BGS.
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION _	Stewart Creek Corridor	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-MW-17D

DATE 6/10/2015

LOCATION Stewart Creek Corridor	DRILLER SCI, Vincent Burnham	TIME 1253
TOTAL DEDTH 4 ET BCS	PIC Cooprobo	NO SAMPLES 2

IOIAL	. DEF III	4 1 1 1 1 1 1 1 1		_ RIG_	Geoprobe No. SAMI EES_2
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	N/A	2.8 4.0	0.5-2.0 (1310)	0-0.75 FT, (CL) SILTY CLAY with some gravel; brown; dry, hard.  0.75-4.0 FT, (CL) SILTY CLAY; dark brown; dry, stiff.
_				2.0-4.0 (1310)	
-5					End of borehole at 4 FT BGS.
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

## Golder Ssociates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-NDA-11

DATE 6/11/2015 TIME \_0902 LOCATION North Disposal Area DRILLER SCI, Vincent Burnham TOTAL DEPTH 4 FT BGS NO. SAMPLES 3 RIG Geoprobe

10174	- DLI III	<del>+111000</del>		_ '\\\_	<u>Geoplobe</u>
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_		X 1 /		0.0-0.5 (0925)	
					0.5-4.0 FT, (CH) CLAY with some gravel; dark brown; slightly moist, stiff.
-				0.5.0.0.0005	
				0.5-2.0 (0925)	
	1	N/A	<u>3.2</u> 4.0		
	•	1071	4.0		
_				2.0-4.0 (0925)	
-					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	North Disposal Area	REVIEWED BY	JW

## Golder Associates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-NDA-12

DATE 6/11/2015

TIME \_1040 LOCATION North Disposal Area DRILLER SCI, Vincent Burnham

TOTAL	_ DEPTH_	4 FT BGS		RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY		DESCRIPTION AND COMMENTS
-	1	N/A	<u>2.8</u> 4.0	0.0-0.5 (1110) 0.5-2.0 (1110) 2.0-4.0 (1110)	0.5-4.0 FT, (CH) CLAY, some gravel; dark brown/black; dry, stiff.
-5					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Disposal Area	REVIEWED BY	JW

LOCATION

North Disposal Area

LOG OF DIRECT PUSH BOREHOLE	
TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3  DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES DESCRIPTION AND COMMENTS  0.0-0.5 (1000) 0-0.5 FT, (CH) CLAY; brown; moist, soft.  0.5-1.5 FT, (CH) CLAY; tan orange mottling; dry, firm.  1 N/A 28 1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	<u></u>
DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES DESCRIPTION AND COMMENTS  0.0-0.5 (1000) 0-0.5 FT, (CH) CLAY; brown; moist, soft.  0.5-1.5 FT, (CH) CLAY; tan orange mottling; dry, firm.  0.5-2.0 (1000) 1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  2.0-4.0 (1000) 3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	n
(Feet) (ppm) RECOVERY SAMPLES DESCRIPTION AND COMMENTS  0.0-0.5 (1000) 0-0.5 FT, (CH) CLAY; brown; moist, soft.  0.5-1.5 FT, (CH) CLAY; tan orange mottling; dry, firm.  1 N/A 2.8 4.0 1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.	n
1 N/A 2.8 4.0 0.5-2.0 (1000)  1.5-1.5 FT, (CH) CLAY; tan orange mottling; dry, firm.  2.0-3.5 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  2.0-4.0 (1000)  3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.	<u>n.</u>
1 N/A 2.8 4.0 0.5-2.0 (1000)  1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  2.0-4.0 (1000)  3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	<u>n.</u>
1 N/A 2.8 4.0 1.5-1.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  2.0-4.0 (1000) 3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	n.
2.0-3.5 FT, (CH) CLAY; tan; dry, firm.  2.0-4.0 (1000)  3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, firm.  3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	
3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	
3.5-3.75 FT, (CH/GC) GRAVELLY CLAY; tan with orange mottling; dry, fir 3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	
3.75-4.0 FT, (CH) CLAY; tan; dry, firm.	
End of borehole at 4 FT BGS	<u>n.</u>
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PROJECT No 130-2086 LOGGED BY AM	
PROJECT _ Exide Frisco CHECKED BY JX	

REVIEWED BY JW

- 10

LOCATION

Stewart Creek Corridor

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16A DATE 6/10/2015 LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham TIME \_0930 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0-0.5 FT, (CL) SILTY CLAY; dark brown; organics; dry, firm. 0.0-0.5 (0935) 0.5-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff. 0.5-2.0 (0935) 3.8 4.0 N/A 2.0-4.0 (0935) End of borehole at 4 FT BGS - 5

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PRC	DJECT No	130-2086	6		LOGGED BY	AM	
PRO	- DJECT	Exide Fris	SCO		CHECKED BY	JX	

**REVIEWED BY** 

JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16B

DATE 6/10/2015 TIME \_0958 LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham

IOIA	_ DEF IT	<del>+111000</del>		_ 1110_	Geoprobe No. SAMI EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1005)	0-0.75 FT, (CL) SILTY CLAY; dark brown with orange and light brown mottling; organics; very dry, hard.
_				0.5-2.0 (1005)	0.75-4.0 FT, (CH) CLAY with some gravel; dark brown with orange mottling; dry, very stiff.
_	1	N/A	<u>3.6</u> 4.0		
_				2.0-4.0 (1005)	
_					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

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

DATE 6/10/2015

		_,
LOCATION Stewart Creek Corridor	DRILLER SCI, Vincent Burnham	TIME _0946
TOTAL DEPTH 4 FT BGS	RIG <u>Geoprobe</u>	NO. SAMPLES 3

TOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0955)	
-				0.5-2.0 (0955)	0.5-4.0 FT, (CH) CLAY; dark brown, ferrous nodules; dry, stiff.
	_			0.5-2.0 (0955)	
	1	N/A	<u>2</u> 4.0		
-				2.0-4.0 (0955)	
					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16D Golder ssociates DATE 6/10/2015 LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham TIME \_0940 NO. SAMPLES 2 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0-0.25 FT, (CL) SILTY CLAY; brown; organics; dry, firm. 0.25-4.0 FT, (CH) CLAY; dark brown with light grey motteling; dry, stiff. 0.5-2.0 (0945) 3.4 4.0 N/A 2.0-4.0 (0945) End of borehole at 4 FT BGS - 5 - 10

PROJECT No 130-2086 LOGGED BY AM

PROJECT Exide Frisco CHECKED BY JX

LOCATION Stewart Creek Corridor REVIEWED BY JW

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## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-SCC-16E

DATE <u>07/27/2015</u>

TIME \_0900 LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham TOTAL DEPTH 4 FT BGS NO. SAMPLES 3 RIG Geoprobe

10171	- DLI III	<del>+111000</del>		_ ''''	<u>Geoprobe</u>
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_ ` ,		,		0.0-0.5 (0912)	
					0.5-0.75 FT, (CLG) SILTY CLAY and GRAVEL; grey; very dry, loose.
-				0.5-2.0 (0914)	0.75-4.0 FT (CH) CLAY: dark brown/black: mostly dry, firm
_	1	N/A	<u>4.0</u> 4.0		
_				2.0-4.0 (0916)	
-					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

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

DATE 07/27/2015

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LOCATION Stewart Creek Corridor	DRILLER SCI, Vincent Burnham	TIME 0911
TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

IOTAL	DEFIN_	4 1 1 1 1 1 1 1		_ KIG_	Geoprobe No. Sawii EES 5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0925)	
					0.5-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
-				0 5 2 0 (0007)	
				0.5-2.0 (0927)	
-	1	N/A	<u>3.95</u> 4.0		
		1071	4.0		
-				2.0-4.0 (0929)	
-					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

	Golder Associates		LOC	G OF DIRI	ECT PUSH BORE	HOLE BOREH	JLE <u>2015-SC</u> TE <u>07/27/2015</u>	C-16G
LOCATIO	ON Stewart 0	Creek Corrido	r	DRII	LER SCI, Vincent Burnh		ИЕ 0840	
TOTAL	_DEPTH	4 FT BGS		RIG_	Geoprobe		. SAMPLES 3	
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DF	ESCRIPTION AND C	OMMENTS	
(1 001)		(PP111)	TKEGGVEIT!	0.0-0.5 (1000)				
					0.5-1.0 FT, (CH) CLAY; r	ed; very dry, hard.		
-				0.5-2.0 (1003)	1.0-4.0 FT, (CH) CLAY; b	prown with grey mottling	ng; stiff, dry.	
-	1	N/A	4.0 4.0		2.0-3.0 with some sand.			
-				2.0-4.0 (1005)				
-					End of borehole at 4 FT E	BGS		
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	DJECT No_	130-2086				LOGGED BY	AM	
	DJECT _	Exide Fris				CHECKED BY	EPW	
LOC	CATION	Stewart (	Creek Corrid	dor		REVIEWED BY	JW	

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

DATE 6/09/2015

LOCATION South Disposal Area	DRILLER SCI, Vincent Burnham	TIME 0939
TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

10171	- DLI III <u> </u>	<del>+111000</del>		_ 1110_	Ocoprobe 220_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
(1 2 2 1)		(PP***)		0.0-0.5 (0945)	
				0.0 0.0 (00 10)	0.5-4.0 FT, (CL) SILTY CLAY; dark brown; dry, firm.
_					
				0.5-2.0 (0945)	
=	1	N/A	<u>3.6</u> 4.0		
	•	IN/A	4.0		
_				2.0-4.0 (0945)	
_					End of borehole at 4 FT BGS
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PRC	JECT No_	130-2086			LOGGED BY	AM	
PRC	JECT	Exide Fris	СО		CHECKED BY	JX	
LOC	ATION	South Dis	posal Area	ı	REVIEWED BY	JW	

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-STB-6A

DATE 6/09/2015

TIME \_1357 LOCATION Slag Treatment Building DRILLER SCI, Vincent Burnham

TOTAL DEPTH 8 FT BGS NO. SAMPLES 3 RIG Geoprobe

IOTAL	L DEPIR	8 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	4.7 2.1	<u>3.4</u> 4.0	1.0-2.0 (1405)	0-1.0 FT, Concrete.  1.0-1.25 FT, FILL - (GP/SP) SAND, coarse, and GRAVEL, fine; dark black; slightly wet, loose, soft.  1.25-1.5 FT, (CL) SILTY CLAY and gravel; dark brown; slightly wet, soft.  1.5-5.0 FT, (CH) CLAY; dark brown with black mottling; dry, stiff.
<b>5</b>	2	4.6	<u>1.6</u> 4.0		5.0-8.0 FT, (CH) CLAY; dark brown; dry, stiff.
		200		6.0-8.0 (1405)	
_					End of borehole at 8.0 FT BGS
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PROJECT No	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	Slag Treatment Building	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE 2015-STB-6B

DATE 6/09/2015

TIME <u>1638</u> LOCATION Slag Treatment Building DRILLER SCI, Vincent Burnham

TOTAL DEPTH 8 FT BGS NO. SAMPLES 3 RIG Geoprobe

IOIA	DEPTH_	011003		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	3.7	<u>3.6</u> 4.0	1.0-2.0 (1450) 2.0-4.0 (1450)	2.5-8.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
_ _ 5	2	6.0	<u>3.8</u> 4.0	4.0-6.0 (1450)	
-		5.0			
- 10 -					End of borehole at 8.0 FT BGS
- 15 - -					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Slag Treatment Building	REVIEWED BY	JW

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

DATE 6/09/2015

TIME \_1425 LOCATION Slag Treatment Building DRILLER SCI, Vincent Burnham

TOTAL DEPTH 8 FT BGS NO. SAMPLES 3 RIG Geoprobe

1		8 FT BGS		- '''	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
-	1	10.1 7.2	<u>3</u> 4.0	0.75-2.0 (1435) 2.0-4.0 (1435)	0-0.75 FT, Concrete.  0.75-1.25 FT, (ML) CLAYEY SILT; red with black mottling; slightly moist, soft.  1.25-1.3 FT, (CL) CLAY and GRAVEL; black, dry, thick/firm.  1.3-2.0 FT, (ML) SILT; light grey/white; dry, loose.  2.0-4.0 FT, (CL) CLAY; dark brown; dry, stiff.
_ _ 5	2	5.8	<u>3.6</u> 4.0	4.0-6.0 (1438)	4.0-5.0 FT, (CL) CLAY, with some gravel, dark brown and light brown; slightly wet, stiff.  5.0-8.0 FT, (CL) CLAY, dark brown; dry, stiff.
-		5.9			
- 10 - 15 15					End of borehole at 8 FT BGS

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Slag Treatment Building	REVIEWED BY	JW

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-A

DATE 6/08/2015

LOCATION South Disposal Area DRILLER SCI, Vincent Burnham TIME 1240

TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3
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10174	L DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1255)	0.0-4 FT, (CL) SILTY CLAY, dark brown/black, some light brown mottling; dry, firm.
_				0.5-2.0 (1255)	
_	1	N/A	<u>4</u> 4.0		
-				2.0-4.0 (1255)	
					End of borehole at 4 FT BGS
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PROJECT No	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-B

DATE 6/08/2015

LOCATION South Disposal Area	DRILLER	SCI, Vincent Burnham	TIME	1248	

IOTAL	DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1300)	0-0.5 FT, (CL) SILTY CLAY, dark brown; very dry, hard.
_					0.5-4.0 FT, (CL) SILTY CLAY, dark brown; dry, firm.
				0.5-2.0 (1300)	
_	1	N/A	<u>4</u> 4.0		
			4.0		
_				2.0-4.0 (1300)	
_					End of borehole at 4 FT BGS
-5					
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- 10					
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- 15					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-C

DATE <u>6/08/2015</u>

LOCATION South Disposal Area	DRILLER	SCI, Vincent Burnham	TIME	1255	
<u> </u>	<del>-</del>	,			

IOTAL	DEPTH_	4 FT BGS		RIG_	Geoprobe	NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES		DESCRIPTION AND COMMENTS
_	1	N/A	<u>3.8</u> 4.0	0.0-0.5 (1310) 0.5-2.0 (1310) 2.0-4.0 (1310)	0.5-4.0 FT, (CL) SILT	EY SILT, organics; dark brown; dry, stiff.  'Y CLAY, trace fine grain gravel (<3%), brown; dry, firm.
_					End of borehole at 4	FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW

# Golder

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE B3RA-D

DATE <u>07/27/2015</u>

LOCATION	South Disposal Area	DRILLER	SCI, Vincent Burnham	TIME	0800	
-						

		4 FT BGS		 RIG	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
-	1	N/A		0.0-0.5 (0810) 0.5-2.0 (0812)	0-2.0 FT, (CH) CLAY; dark brown, some orange/ferrous mottling; dry, stiff, stiff-hard.
-	·			2.0-4.0 (0814)	
					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	South Disposal Area	REVIEWED BY	JW

Caldan	
Golder	
<b>Associates</b>	

DATE 6/10/2015

LOCATION North Tributary Corridor and North Wooded Area RILLER SCI, Vincent Burnham TIME 1340

DEPTH (Feet)	RUN NO.	PID (ppm)			
(Feet)	110111101	(mag)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
( 333)		( - /			0-4 0 FT (CH) CLAY: dark brown/black: trace amounts of gravel (<2%) dry very
					0-4.0 FT, (CH) CLAY; dark brown/black; trace amounts of gravel (<2%), dry, very stiff.
					oun.
L I					
				0.5-2.0 (1345)	
				1	
		B 1 / A	4		
F 1	1 1	N/A	4.0		
			•		
⊢ I				2.0-4.0 (1345)	
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r 1					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW

Golder
Associates

DATE 6/10/2015

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

IOIAL	DEFIN_	<del>+111000</del>		_ 1110_	Geoprobe No. Salvii EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1355)	0-0.5 FT, (CL) SILTY CLAY; light brown; slightly moist, soft.
					0.5-4.0 FT, (CH) CLAY with some silt; dark brownwith black mottling; dry, firm.
-				0.5-2.0 (1355)	
				0.5-2.0 (1355)	
_	1	N/A	<u>0.75</u> 4.0		
			4.0		
				0 0 4 0 (4055)	
				2.0-4.0 (1355)	
-					End of borehole at 4 FT BGS
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- 10					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW

Golder
Associates

DATE 6/10/2015

LOCATION North Tributary Corridor and North Wooded AreaRILLER SCI, Vincent Burnham TIME 1332

IOIA	DEPTH_	4 FT BGS		RIG_	Geoprobe	NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES		DESCRIPTION AND COMMENTS
				0.0-0.5 (1340)	0-0.25 FT, (CL) SILTY	CLAY; brown; organics; very dry, hard.
					0.5-4.0 FT, (CH) CLAY	with some gravel; dark brown; dry, stiff.
				0.5-2.0 (1340)		
			4			
	1	N/A	<u>4</u> 4.0			
				2.0-4.0 (1340)		
					End of borehole at 4 F	T BGS
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- 10						
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW



DATE <u>07/29/2015</u>

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

	· · · · <u>· · · · · · · · · · · · ·</u>	<del>+111000</del>			Ocoprobe Telephone
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0855)	
-				0.5-2.0 (0857)	0.75-2.5 FT, (CH) CLAY with trace gravel; dark brown/black; dry, stiff.
-	1	N/A	<u>4.0</u> 4.0		
-				2.0-4.0 (0900)	2.5-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black with some orange mottling, gypsum deposits; dry, stiff.
					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE E-11C-B

DATE 6/10/2015

TIME \_1401 LOCATION North Tributary Corridor and North Wooded AreaRILLER SCI, Vincent Burnham

IOTAL	_ DEP I II	8 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	N/A	<u>3.4</u> 4.0	0.0-0.5 (1410)	0-0.25 FT, (CL) SILTY CLAY; brown; organics; very dry, hard. 0.5-6.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
<b>5</b>	2	N/A	<u>4</u> 4.0	0.5-2.0 (1410)	6.0-7.0 FT, (CH) GRAVELLY CLAY; brown; dry, very stiff.
_				2.0-4.0 (1410)	7.0-8.0 FT, (CH) GRAVELLY CLAY; light brown with dark brown motteling; dry, stiff.
					End of borehole at 8 FT BGS
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- 15 -					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION _	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW



DATE 6/10/2015

LOCATION North Tributary Corridor and North Wooded Area RILLER SCI, Vincent Burnham TIME 1384

IOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1440)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff.
_				0.5-2.0 (1440)	
_	1	N/A	<u>3.4</u> 4.0		
_				2.0-4.0 (1440)	
_					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION _	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW



DATE 6/10/2015

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

IOIA	_ DEF I II	4 1 1 1 1 1 1 1 1		_ 1/10_	Geoprobe No. SAMI ELS_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1430)	0-2.0 FT, (CH) CLAY with some silt; dark brown/black; mostly dry, soft.
				0.5-2.0 (1430)	
	1	N/A	<u>2.4</u> 4.0		
	'	IN/A	4.0		2.0-4.0 FT, (CH) CLAY; dark brown with black mottling; dry, stiff.
				2.0-4.0 (1430)	
-					End of borehole at 4 FT BGS
					End of boreflore at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW

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Golder	
<b>Associates</b>	

DATE 07/29/2015

LOCATION N Tributary Corridor & N Wooded Area DRILLER SCI, Vincent Burnham TIME 1510

					Ocoprobe =======
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
		\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		0.0-0.5 (1515)	
					0.5-4 FT, (CL) GRAVELLY SILTY CLAY; brown; loose, dry, hard.
-				0.5.0.0 (4.5.4.7)	
				0.5-2.0 (1517)	
	1	NA	<u>3.95</u> 4.0		
	•	1473	4.0		
				2.0-4.0 (1520)	
-					End of borehole at 4 FT BGS
					End of potoniolo di TTT poe
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PROJECT No	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION	N Tributary Corridor & N Wooded Area	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11A

DATE <u>6/11/2015</u>

LOCATION N Tributary Corridor & N Wooded Area

DRILLER SCI, Vincent Burnham

TIME \_1400

TOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3	
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS	
(. 551)		(PP)	1120012111	0.0-0.5 (1410)		
-				0.5-2.0 (1410)	1.0-4.0 FT, (CH) CLAY; dark brown, black mottling; dry, firm.	
-	1	N/A	<u>3.2</u> 4.0			
			4.0			
-				2.0-4.0 (1410)		
-					End of borehole at 4 FT BGS	
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	N Tributary Corridor & N Wooded Area	REVIEWED BY	JW

# Golder

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11B

DATE 6/11/2015

LOCATION North Tributary Corridor and North Wooded AreaRILLER SCI, Vincent Burnham TIME 1431

	- DLI III			- '""	Ocoprobe ======
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
		,		0.0-0.5 (1435)	
				0.5-2.0 (1435)	
				, 1	
-	1	N/A	<u>2.8</u> 4.0		
-				2.0-4.0 (1435)	
					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW

# Golder

#### LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11C

DATE 6/11/2015

LOCATION North Tributary Corridor and North Wooded AreaRILLER SCI, Vincent Burnham TIME 1419

IOIAL	_ DEF ITI	4 1 1 1 1 1 1 1		_ 1010_	Geoprobe No. SAMI ELS_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1425)	0-0.25 FT (ML) CLAYEY SILT; brown; slightly moist, soft. 0.25-2.0 FT, (CH) CLAY; dark brown; dry, firm.
					0.25-2.0 FT, (CH) CLAT, dark blown, dry, lilli.
_				0.5-2.0 (1425)	
_	1	N/A	<u>3</u> 4.0		2.0-2.25 FT, (CH) CLAY and GRAVEL; gray and reddish brown; moist, stiff-hard.
					2.25-4.0 FT, (CH) CLAY; dark brown; dry, firm.
-				2.0-4.0 (1425)	
					End of borehole at 4 FT BGS
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PROJECT No	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-11D

DATE 6/11/2015

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

IOIAL	- DLI III	4 1 1 1 1 1 1 1 1		_ 1110_	Geoprobe No. SAMI EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_ `		,,,		0.0-0.5 (1450)	
				1	0.5-4.0 FT, (CL) SILTY CLAY with organics; dark brown, dry, stiff.
-					
				0.5-2.0 (1450)	
	1	N/A	2.8		
	1	N/A	<u>2.8</u> 4.0		
-				2.0-4.0 (1450)	
					End of borehole at 4 FT BGS
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- 10					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	North Tributary Corridor and North Wooded Area	REVIEWED BY	JW



DATE <u>07/28/2015</u>

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 0742

IOIA	_ DEF IT	4 1 1 1 1 1 1 1 1		_ 1110_	Geoprobe No. SAMI EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0746)	0-0.75 FT (ML) CLAYEY SILT with organics; brown; dry, loose, soft.
_	1	N/A	3.8 4.0	0.5-2.0 (0750)	0.75-4.0 FT, (CL) CLAY with some silt; dark brown with tan mottling; dry, stiff.
_				2.0-4.0 (0752)	
-					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE 07/28/2015

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

IOIAL	_ DEF IT	4 1 1 1 1 1 1 1 1		_ NG_	Geoprobe No. Salvii EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (0815)	0-0.25 FT (ML) CLAYEY SILT with organics; brown; loose, dry.
					0.25-3.0 FT, (CL) CLAY; dark brown; dry, stiff.
				0.5-2.0 (0818)	
	_		3.8		
	1	N/A	3.8 4.0		
				2.0-4.0 (0820)	3.0-3.5 FT, (CLG) GRAVELLY CLAY; brown; loose, dry.
					3.5-4.0 FT, (CL) CLAY with some silt; dark brown; mostly dry, soft.
					End of borehole at 4 FT BGS
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PROJECT No	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE <u>07/28/2015</u>

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

TOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
-	1	N/A	<u>3.75</u> 4.0	0.0-0.5 (0945) 0.5-2.0 (0947) 2.0-4.0 (0950)	1.0-2.5 FT, (CL) SILTY CLAY; dark brown; dry, hard-stiff.  2.5-4.0 FT, (CL) CLAY with some silt; dark brown/black; dry, soft.
-					End of borehole at 4 FT BGS
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE 07/28/2015

LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham TIME 0959

TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

IOIAL	_ DEF ITI	411000		_ NG_	Geoprobe No. SAMI EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1005)	0-2.5 FT, (CL) SILTY CLAY; dark brown; very dry, hard, firm.
				0.5-2.0 (1008)	
	1	N/A	3.75 4.0		
	•		4.0		O. F. A.O. ET. (OLVORAVELLY OUTVOLAY) have been force
_				2.0-4.0 (1010)	2.5-4.0 FT, (CL) GRAVELLY SILTY CLAY; brown; dry, hard, firm.
-					End of borehole at 4 FT BGS
-5					
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- 10					
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<b>-</b> 15					
-					
-					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE <u>07/28/2015</u>

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

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

IOTAL	L DEPTH_	4 FT BGS		_ RIG_	Hand Auger NO. SAME	LES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMEN	ITS
				0.0-0.5 (1230)	0-2.0 FT, (ML) SILT with some clay; dark brown; very	dry, hard, firm.
_				0.5-2.0 (1240)	1.75-2.0 FT area of gravel and silt (friable sandste	one).
	1	N/A	<u>NA</u> 4.0			
		1 11 1	4.0		2.0-4.0 FT, (CL) SILTY CLAY and some gravel; dark l	prown/black; dry, stiff.
_				2.0-4.0 (1250)		
					Ford of horsehole at 4 FT DOC	
					End of borehole at 4 FT BGS	
-5						
_						
-						
- 10						
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<del>-</del> 15						
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	l	<u> </u>	<u> </u>			

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE <u>07/27/2015</u>

TIME \_1325 LOCATION North Tributary Corridor & North Wooded Area DRILLER SCI, Vincent Burnham

IOIAL	_ DEF III	3.5 FT BG	<i></i>	_ NG_	Geoprobe No. SAMI ELS_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1326)	0-0.5 FT, (ML) SILT with some clay and organics; dark brown; loose, very dry.
-	1	N/A	<u>NA</u> 3.5	0.5-2.0 (1337) 2.0-3.5 (1345)	0.5-3.0 FT, (CL) SILTY CLAY and some gravel; dark brown with orange ferrous mottling; dry, firm.
F				1	3.0-3.5 FT, (CL) SILTY CLAY and GRAVEL; dark brown, loose, dry.
_ _ 5					Refusal at 3.5 FT BGS
_					
- 10 - -					
-					
- 15 - -					
_					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW



DATE <u>07/28/2015</u>

OCATION North Tributary Corridor &	North Wooded Area DRILLER SCI, Vincent Burnham	TIME _1037
TOTAL DEPTH 4 FT BGS	RIG <u>Geoprobe</u>	NO. SAMPLES_3

IOTAL	_ DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1045)	
					0.5-2.5 FT, (CL) CLAY with some silt; dark brown; dry, stiff.
				0.5-2.0 (1047)	
	1	N/A	3.85 4.0		
		IWA	4.0		
				2.0-4.0 (1050)	2.5-4.0 FT, (CL) CLAY; dark brown; mostly dry, stiff.
				2.0 1.0 (1000)	
_					5 1 (1 1 1 1 1 1 1 5 7 7 7 7 7 7 7 7 7 7 7 7
					End of borehole at 4 FT BGS
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-					
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_					
- 10					
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_					
<del>-</del> 15					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	North Tributary Corridor & North Wooded Area	REVIEWED BY	JW

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-5-A

DATE <u>6/10/2015</u>

LOCATION South Disp	osal Area	DRILLER	SCI. Vincent Burnham	TIME	1033

IOTAL	_ DEPTH_	4 FT BGS		$_{\scriptscriptstyle -}$ RIG $_{\scriptscriptstyle -}$	Geoprobe NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY		DESCRIPTION AND COMMENTS
-	1	N/A		0.0-0.5 (1040)	0.5-4.0 FT, (CH) CLAY some gravel; brown; slightly moist, stiff.
_				2.0-4.0 (1040)	
-5					End of borehole at 4 FT BGS
_					
_					
- 10 -					
_					
_					
- 15 -					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW

DATE 6/09/2015

LOCATION_	South Disposal Area	DRILLER	SCI, Vincent Burnham	TIME	0947
_	-	_	·		

	DEPTH	4 FT BGS		 RIG	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
-	1	N/A		0.0-0.5 (0955)	0.5-2.0 FT, (CH) CLAY with some silt; dark brown; dry, firm.
				2.0-4.0 (0955)	
-5					End of borehole at 4 FT BGS
- 10					
- 15					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW

## Golder

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE ECO-8D

DATE 6/09/2015

LOCATION South Disposal Area DRILLER SCI, Vincent Burnham TIME 0953

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

IOIA	T DELIH	4 FT BGS		RIG_	Geoprobe	NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES		DESCRIPTION AND COMMENTS
_	1	N/A		0.0-0.5 (1055) 0.5-2.0 (1055) 2.0-4.0 (1055	0.5-4.0 FT, (CH) CLA	CLAY; dark brown; organics, dry, firm. Y; some fine grain gravel (<5%), dark brown; dry, stiff.
_ _ 5					End of borehole at 4 F	FT BGS
- 10 -						
_ _ _ 15						
-						

PROJECT No	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	South Disposal Area	REVIEWED BY	JW



<del>-</del> 15

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4A

DATE 07/27/2015

LOCATION Lake Parcel DRILLER SCI, Vincent Burnham TIME 1333

NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS  $RIG_{\bot}$ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** 0-0.25 FT organics. 0-4.0 FT, (CL) CLAY; dark brown/black; dry, stiff. 0-0.5 (1340) 0.5-2.0 (1342) 3.95 4.0 1 N/A 2.0-4.0 (1346) End of borehole at 4 FT BGS - 5 <del>-</del> 10

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW



LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4B DATE 07/27/2015 LOCATION Lake Parcel DRILLER SCI, Vincent Burnham TIME \_1328 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe DEPTH (Feet) RUN NO. PID RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0-0.25 organics. 0.0-0.5 (1338) 0-4.0 FT, (CL) CLAY; dark brown/black with significant orange ferrous mottling; dry, very stiff. 0.5-2.0 (1340) 3.85 4.0 1 N/A 2.0-4.0 (1342) End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW



### LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4C

DATE 07/27/2015

LOCATION Lake Parcel	DRILLER SCI, Vincent Burnham	TIME 1321
TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

TOTAL	L DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1327)	
_				0.5-2.0 (1331)	0-4.0 FT, (CL) CLAY; dark brown/black; dry, very stiff.
				0.5-2.0 (1331)	2.0-4.0 FT, orange ferrous mottling
_	1	N/A	3.90 4.0		
_				2.0-4.0 (1337)	
					End of borehole at 4 FT BGS
-5					
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- 10					
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<del>-</del> 15					
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_					
	1	1	1		

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW



### LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4D

DATE <u>07/27/2015</u>

 LOCATION \_ Lake Parcel
 DRILLER \_ SCI, Vincent Burnham
 TIME \_ 1315

 TOTAL DEPTH \_ 4 FT BGS
 RIG \_ Geoprobe \_ \_\_\_\_\_
 NO. SAMPLES \_ 3 \_ \_\_\_\_\_

IOIA	_ DEF IT	411000		_ NG_	Geoprobe No. SAMI EES_5
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1327)	0-0.25 organics
					0-2.0 FT, Orange ferrous mottling
				0.5-2.0 (1329)	0-4.0 FT, (CL) CLAY; dark brown/black; dry, stiff.
_	1	N/A	<u>3.90</u> 4.0		
			4.0		
_				2.0-4.0 (1330)	
					End of borehole at 4 FT BGS
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_5					
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_					
<del>-</del> 10					
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_					
<del>-</del> 15					
-					
-					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION _	Lake Parcel	REVIEWED BY _	JW

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Associates

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE F-4E

DATE 07/27/2015

LOCATION Lake Parcel DRILLER SCI, Vincent Burnham TIME 1310

NO. SAMPLES 2 TOTAL DEPTH 4 FT BGS  $RIG_{\perp}$ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES DESCRIPTION AND COMMENTS 0-4.0 FT, (CL) CLAY; dark brown/black with orange ferrous mottling; dry, very 0.5-2.0 (1320) 3.85 4.0 1 N/A 2.0-4.0 (1322) End of borehole at 4 FT BGS - 5 <del>-</del> 10 <del>-</del> 15

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT _	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW

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Associates

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5A

DATE <u>07/27/2015</u>

				- ''''	
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_				0.0-0.5 (1112) 0.5-2.0 (1119)	
-	1	NA	<u>3.25</u> 4.0	2.0-4.0 (1120)	
_					End of borehole at 4 FT BGS
-5					
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- 10					
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- 15					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5B Golder ssociates DATE <u>07/27/2015</u> LOCATION \_ Lake Parcel DRILLER SCI, Vincent Burnham TIME \_1039 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS  $RIG_{\perp}$ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** 0-0.5 FT, organics. 0.0-0.5 (1044) 0-4.0 FT, (CH) CLAY; dark brown/black; dry, stiff. 0.5-2.0 (1046) 3.95 4.0 1 NA 2.0-4.0 (1048) End of borehole at 4 FT BGS - 5 <del>-</del> 10 <del>-</del> 15

PROJECT No	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5C

DATE 07/27/2015

OCATION Lake Parcel	DRILLER SCI, Vincent Burnham	TIME 1043
TOTAL DEPTH 4 FT BGS	RIG Geoprobe	NO. SAMPLES 3

	RUN NO.	DID			
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1100)	0-4.0 FT, (CH) CLAY; dark brown/black; dry, very stiff.
-					
				0.5-2.0 (1103)	
-	1	NA	<u>4.0</u> 4.0		
			4.0		
-				2.0-4.0 (1105)	
-					End of borehole at 4 FT BGS
- 5					
3					
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- 10					
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- 15					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW

Golder
Associates

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-5D DATE <u>07/27/2015</u> LOCATION \_ Lake Parcel TIME \_1054 DRILLER SCI, Vincent Burnham NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES DESCRIPTION AND COMMENTS 0-4.0 FT, (CH) CLAY; dark brown/black; dry, very stiff. 0.0-0.5 (1111) 0.5-2.0 (1115) 3.0 4.0 1 NA 2.0-4.0 (1117) End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No	130-2086	<b>,</b>			LOGGED BY	AM
PROJECT _	PROJECT Exide Frisco				CHECKED BY	EPW
LOCATION	Lake Par	cel			REVIEWED BY	JW
				SHEET 1 of 1		



<del>-</del> 15

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6A Golder ssociates DATE <u>07/27/2015</u> LOCATION Lake Parcel DRILLER SCI, Vincent Burnham TIME \_1334 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS RIG\_ Geoprobe **DEPTH** RUN NO. PID (Feet) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** (ppm) 0-0.2 FT, organics 0.0-0.5 (1443) 0-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black; dry, very stiff. 0.5-2.0 (1447) 3.5 4.0 NA 2.0-4.0 (1450) End of borehole at 4 FT BGS - 5 - 10

PROJECT No 130-2086 LOGGED BY AM **PROJECT** Exide Frisco **CHECKED BY EPW LOCATION** Lake Parcel **REVIEWED BY** JW

Caldan
Golder
Associates

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6B

DATE <u>07/27/2015</u>

LOCATION Lake Parcel DRILLER SCI, Vincent Burnham TIME 1340

TOTAL DEPTH 4 ET BGS RIG Geoprobe NO. SAMPLES 3

10171	- DLI III	<del>+111000</del>		_ '\\\_	<u>Geoplobe</u>
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1450)	
				1	0-4.0 FT, (CH) GRAVELLY CLAY; dark brown/black; dry, very stiff.
-				0.5.0.0 (4.450)	
				0.5-2.0 (1452)	
_	1	NA	3.8 4.0		
	•	l IVA	4.0		
-				2.0-4.0 (1454)	
-					End of borehole at 4 FT BGS
					End of Botoniolo de TTT Boo
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<del>-</del> 10					
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- 15					
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PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Lake Parcel	REVIEWED BY	JW

Golder
Associates

LOG OF DIRECT PUSH BOREHOLE BOREHOLE G-6C DATE <u>07/27/2015</u> LOCATION \_ Lake Parcel DRILLER SCI, Vincent Burnham TIME \_1420 NO. SAMPLES 3 TOTAL DEPTH 4 FT BGS  $RIG_{\perp}$ Geoprobe DEPTH (Feet) RUN NO. PID (ppm) RECOVERY SAMPLES **DESCRIPTION AND COMMENTS** 0-0.2 FT, organics 0.0-0.5 (1428) 0-2.0 FT, (CH) CLAY; brown with orange, black, and grey mottling; dry, stiff. 0.5-2.0 (1430) 3.95 4.0 NA 2.0-4.0 FT, (CH) CLAY; dark brown/black with orange ferrous mottling; stiff. 2.0-4.0 (1432) End of borehole at 4 FT BGS - 5 - 10 <del>-</del> 15

PROJECT No_	130-2086	5		LOGGED BY	AM	
PROJECT	Exide Fris	SCO		CHECKED BY	EPW	
LOCATION	Lake Par	cel		REVIEWED BY	JW	
			SHEET 1 of 1			

	Golder Associates		LO	G OF DIRI	ECT PUSH BOREHOLE	BOREH	IOLE_	G-6D 07/27/2015
LOCATIO	N_Lake Pa			DDILLED CCI Vincent Durnham				
	. DEPTH	4 FT BGS		DRII RIG_	LER SCI, Vincent Burnham  Geoprobe		ME <u> </u>	PLES 2
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES		TION AND C		
	1	NA	<u>2.0</u> 4.0	0.5-2.0 (1434) 2.0-4.0 (1436)		s, brown with	n orange	
-5					End of borehole at 4 FT BGS			
-10								
-15								
PRC	JECT No	130-2086	 S		LOGG	ED BY	ΑN	
	JECT _	Exide Fris				KED BY		ΡW

PROJECT No_	130-2086			LOGGED BY	AM
PROJECT _	Exide Fris	со		CHECKED BY	EPW
LOCATION	Lake Pard	cel		REVIEWED BY	JW
			SHEET 1 of 1		

## Golder

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE SCC-5C

DATE 6/10/2015

LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham TIME 1017

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 2

10171	- DLI III <u> </u>	<del>+111000</del>		_ '\\\\_	Geoprobe 220 =
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	N/A		0.5-2.0 (1025)	0-0.5 FT, (ML) CLAYEY SILT with some gravel and organics; brown; very dry, hard. 0.5-4.0 FT, (CH) CLAY, some gravel, ferrous nodules, and organics; brown with
_				2.0-4.0 (1025)	
5 					End of borehole at 4 FT BGS
_					
_ _ 10					
- - - 15					
-					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

# Golder

### LOG OF DIRECT PUSH BOREHOLE BOREHOLE SCC-5D

DATE 07/27/2015

LOCATION Stewart Creek Corridor DRILLER SCI, Vincent Burnham TIME 0740

TOTAL DEPTH 6 FT BGS RIG Geoprobe NO. SAMPLES 2

IOTAL	L DEPTH_	6 FT BGS		$_{\scriptscriptstyle -}$ RIG $_{\scriptscriptstyle -}$	Geoprobe NO. SAMPLES_2
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
_	1	N/A	<u>3.75</u> 4.0	2.0-4.0 (0745)	
-5	2	N/A	<u>2.0</u> 2.0	4.0-6.0 (0750)	4.0-6.0 FT, (CH) CLAY with trace gravel; brown with some orange ferrous mottling; slightly moist, stiff.
					End of borehole at 6 FT BGS
_					
_ _ 10					
_					
_					
<del>-</del> 15					
-					

PROJECT No_	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	EPW
LOCATION	Stewart Creek Corridor	REVIEWED BY	JW

### Golder Associates

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE SRB-VS-3A

DATE 6/08/2015

LOCATION Shooting Range Berm & South Berm DRILLER SCI, Vincent Burnham TIME 1230

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

TOTAL	L DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES 3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
-	1	N/A		0.0-0.5 (1230)	
-				2.0-4.0 (1230)	
-5 -					End of borehole at 4 FT BGS
_					
_ _ 10					
_					
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15 					
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_					

PROJECT No	130-2086	LOGGED BY	AM
PROJECT	Exide Frisco	CHECKED BY	JX
LOCATION _	Shooting Range Berm & South Berm	REVIEWED BY	JW

## Golder

## LOG OF DIRECT PUSH BOREHOLE BOREHOLE SRB-VS-7A

DATE 6/08/2015

LOCATION Shooting Range Berm & South Berm DRILLER SCI, Vincent Burnham TIME 1030

TOTAL DEPTH 4 FT BGS RIG Geoprobe NO. SAMPLES 3

IOIA	L DEPTH_	4 FT BGS		_ RIG_	Geoprobe NO. SAMPLES_3
DEPTH (Feet)	RUN NO.	PID (ppm)	RECOVERY	SAMPLES	DESCRIPTION AND COMMENTS
				0.0-0.5 (1045)	
					0.5-2.0 FT, (CH) CLAY; orange/brown; dry, firm.
				0.5-2.0 (1045)	
	1	NI/A	3.8		
	1	N/A	<u>3.8</u> 4.0		2.0-2.25 FT, (CL) SILTY CLAY; red/brown; dry, stiff.
				2040/4045	2.25-4.0 FT, (CH) CLAY; orange brown with some light grey mottling; dry, firm.
				2.0-4.0 (1045)	
					End of borehole at 4 FT BGS
-5					
3					
<del>-</del> 10					
<del>-</del> 15					

PROJECT No	130-2086	L	OGGED BY	AM
PROJECT _	Exide Frisco	C	HECKED BY	JX
LOCATION	Shooting Range Berm & South Berm	R	REVIEWED BY	JW



### **LOG OF LMW-9R**

DRILLING METHOD: HSA

NORTHING: 7,103,254 FT EASTING: 2,480,865 FT

DATE/TIME: 3/1/2016, 1322

DRILLER: West Drilling, Steven Wimple

DAIL/IIIVI	E: 3/1/20	710, 1322		DIVILLI	LIX. VVC	אַרווווווע	, Steven Wimple EASTING: 2,480,865 FT
TOTAL DE	EPTH: 30	FT BGS		RIG:	CME-75		SURFACE ELEVATION: 661.39 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(* 223)		(* 1 11)	(1 223)		CL-ML		0.0-0.75 FT, (CL-ML) SILTY CLAY, organics, trace fine gravel; brown and orange; dry, firm.
	1		<u>5.0</u> 5.0		CL-ML		0.75-2.5 FT, (CL-ML) SILTY CLAY, trace fine gravel; dark brown; dry, firm.
5	1		5.0		CL		2.5-7.5 FT, (CL) CLAY, trace fine gravel; brown; dry, stiff.
			3.0		OL.		
10	2		3 <u>.0</u> 5.0				7.5-17.5 FT, (CL) CLAY; gray with orange mottling; dry, hard.
	3		<u>2.5</u> 5.0		CL		
15				-			
	4		<u>5.0</u> 5.0				
	4		5.0		CL & SHALE		17.5-24 FT, INTERBEDDED (CL) CLAY AND SHALE; gray with orange mottling dry, hard.

PROJECT No:	130-2086-01	COMPILED BY:	AM
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	CL2LF	REVIEWED BY:	AMF



### LOG OF LMW-9R

DRILLING METHOD: HSA NORTHING: 7,103,254 FT

DATE/TIME: 3/1/2016, 1322 DRILLER: West Drilling, Steven Wimple EASTING: 2,480,865 FT

TOTAL DEPTH: 30 FT BGS RIG: CME-75 SURFACE ELEVATION: 661.39 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	5		<u>5.0</u> 5.0		CL & SHALE		17.5-24 FT, INTERBEDDED (CL) CLAY AND SHALE; gray with orange mottling, dry, hard. (Continued)  24-30 FT, SHALE; gray; dry, hard.
- 25	6		<u>5.0</u> 5.0		SHALE		
- 30							End of borehole at 30 FT BGS
- 35 - -							
-							

PROJECT No:	130-2086-01	COMPILED BY:	AM
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	CL2LF	REVIEWED BY:	AMF

#### Log of Boring: MW-28 **Exide Technologies** Drilling Method: HSA Completion Date: 2/27/2013 Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 Drilling Company: Frisco, TX Total Depth (ft): Chris Combs 20 Driller: Northing Driller's License: 56033 7102977.6985 Logged By: Roberta Russell Easting: 2479831.956 PBW Project No. 1755 Ground Elev. (ft AMSL): 639.47 Tim Jennings, P.G. Field Supervisor: TOC Elev. (ft AMSL): Sampling Method: 5' Split Spoon Lithologic Well Depth Recovery USCS Sample (ft) Materials (ft/ft) Description (0 - 10.8) Sitty CLAY/Clayey SILT, dark reddish brown, soft to firm, low to medium O plasticity, calcareous nodules starting at 7.5'. 5,0/5.0 5 CUMU 5.0/5.0 10 (10.8 - 13.5) Gravelly CLAY, yellowish brown, moist, wet at 12.8', soft to firm, low to medium plasticity clay, calcareous nodules, $\,\sim\!10\%$ gravel in clay matrix.

calcareous nodules.

medium plasticity.

(19.5 - 20.0) SHALE, dry, hard.

4.2/5.0

5,0/5.0

CLIMI

SH

15

20

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hote Plug (2.5 - 20.0) 20/40 Siica Sand

Well Materials

(13.5 - 16.5) Sandy CLAY, yellowish brown, wel, soft to firm, low plasticty clay,

(16.5 - 19.5) Silty CLAY/Clayey SILT, yellowish brown, moist, soft to firm, low to

(+3.44 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

RECORD OF BOREHOLE RCA-BH-1 SHEET 1 of 1 PROJECT: Exide Frisco PROJECT NUMBER: 130-2086 DRILLING METHOD: DRILLING DATE: 07/12/2018 DATUM: Local AZIMUTH: N/A ELEVATION: N/A INCLINATION: -90 LOCATION: Inside Wall S of Former Oxide BldgRILL RIG: Geoprobe 7822DT COORDINATES: N: N/A E: N/A SOIL PROFILE SAMPLES BORING METHOD DEPTH (feet) ELEV. PENETRATION RESISTANCE GRAPHIC LOG NUMBER BLOWS BLOWS / ft REMARKS DESCRIPTION per 6 in Ν DEPTH 140 lb hammer (ft) 20 30 - 0 (0.0 - 1.0) CONCRETE and GRAVEL (1.0 - 10.5) (CL) SILTY CLAY, low to 1.0 medium plastic, some fine sand; dark yellowish brown (10YR 4/2); cohesive, w~PL, very stiff. (PP~2.5 tsf) <u>2</u> 3 1.4 1.5 SPT 1 8 (3.5) Soil color changes to moderate yellowish brown (10YR 5/4). 3.5 1.2 1.5 2 SPT 11 - 5 CL 10 (10.5 - 16.0) (CH) CLAY, high plastic, some nonplastic fines; light brown (5YR 5/6) marbled with moderate yellowish brown (10YR 5/4); cohesive, w~PL, very stiff. (PP~3 tsf) 10.5 <u>1.5</u> 1.5 3 SPT 10 HSA RCA-BH-1 SH-4: UU = 3,200 psf, Dry Unit Weight = 90.1 pcf 1.4 2.0 - 15 SH (16.0 - 25.0) SHALE - (CH) CLAY, high plastic; medium dark gray (N4); cohesive, w<PL, hard. (PP>4.5 tsf) 16.0 15 19 28 1.5 1.5 SPT 5 47 - 20 15 23 23 1.5 1.5 6 SPT 46 - 25 - 30 - 35 - 40 SCALE: 1 in = 5 ft LOGGED: PJJ

DRILLING CONTRACTOR: WEST Drilling

DRILLER: Bob Williams

8/13/18

GLDR\_CO.GDT

1302086 EXIDE FRISCO.GPJ

RECORD OF BOREHOLE MWD

GOLDER STL

CHECKED: BCW REVIEWED: KMB



RECORD OF BOREHOLE RCA-BH-2 SHEET 1 of 1 DRILLING METHOD: DRILLING DATE: 7/12/2018 PROJECT: Exide Frisco PROJECT NUMBER: 130-2086 DATUM: Local AZIMUTH: N/A ELEVATION: N/A INCLINATION: -90 LOCATION: Inside Wall W of Former Admin DRILL RIG: Geoprobe 7822DT COORDINATES: N: N/A E: N/A SOIL PROFILE SAMPLES BORING METHOD DEPTH (feet) ELEV. PENETRATION RESISTANCE GRAPHIC LOG NUMBER BLOWS BLOWS / ft REMARKS DESCRIPTION per 6 in Ν DEPTH 140 lb hammer (ft) 30 inch drop 20 30 - 0 (0.0 - 19.0) (CL) SILTY CLAY, low to medium plastic; dusky yellowish brown (10YR 2/2); cohesive, w<PL, firm. 0.8 1.5 SPT 13 (3.0) Trace organics, soil becomes hard. (PP>4.5 tsf) 3.0 1.5 1.5 2 SPT 12 CL - 5 (9.0 - 19.0) (CH) CLAY, high plastic; dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff. (PP~1.25 tsf) 9.0 <u>WH</u> <u>1.5</u> 1.5 SPT 7 3 RCA-BH-2 SH-4: UU = 14,200 psf, Dry Unit Weight = 95.6 pcf <u>1.3</u> 2.0 SH HSA <u>2</u> <u>0.6</u> 1.5 5 SPT 9 - 15 (19.0 - 25.0) SHALE - (CH) CLAY, high 19.0 plastic; medium dark gray (N4); cohesive, w<PL, hard. (PP>4.5 tsf). 1.5 1.5 SPT 6 15 - 20 СН 1.5 1.5 7 SPT 20 - 25 - 35 - 40

SCALE: 1 in = 5 ft

8/13/18

1302086 EXIDE FRISCO.GPJ GLDR\_CO.GDT

RECORD OF BOREHOLE MWD

GOLDER STL

DRILLING CONTRACTOR: WEST Drilling

DRILLER: Bob Williams



RECORD OF BOREHOLE RCA-BH-3 SHEET 1 of 1 PROJECT: Exide Frisco PROJECT NUMBER: 130-2086 DRILLING METHOD: DRILLING DATE: 7/12/2018 DATUM: Local AZIMUTH: N/A ELEVATION: N/A INCLINATION: -90 LOCATION: Inside Wall E of Former Diesel ASDRILL RIG: Geoprobe 7822DT COORDINATES: N: N/A E: N/A SOIL PROFILE SAMPLES BORING METHOD DEPTH (feet) ELEV. PENETRATION RESISTANCE GRAPHIC LOG NUMBER BLOWS BLOWS / ft REMARKS DESCRIPTION per 6 in Ν DEPTH 140 lb hammer (ft) 10 20 30 - 0 (0.0 - 1.0) CONCRETE and GRAVEL (1.0 - 8.5) (CH) CLAY, high plastic, some nonplastic fines, some fine sand; olive gray (5Y 4/1); cohesive, w~PL, stiff. (PP~1.5 tsf) 1.0 1.5 1.5 SPT 8 556 1.3 1.5 2 SPT 11 CL - 5 (8.5 - 13.5) (CL) Sandy SILTY CLAY, low 1.5 1.5 to medium plastic, fine to medium sand; olive gray (5Y 4/1); cohesive, w~PL, soft. 3 SPT 2 RCA-BH-3 SH-4: Hydraulic Conductivity = 2.94e-8 cm/sec, Dry Unit 1.8 2.0 CL SH Weight = 95.5 pcf HSA (13.5 - 18.5) (CL) gravelly CLAY, low plastic, fine to medium gravel; light olive gray (5Y 6/1), olive gray gray (5Y 4/1), and yellowish gray (5Y 8/1); cohesive, w~PL, stiff. (PP~2 tsf). 13.5 1.5 1.5 SPT 5 7 15 CL (18.5 - 23.5) SHALE - (CH) CLAY, high plastic; medium dark gray (N4); cohesive, 18.5 <u>15</u> 22 1.5 1.5 SPT 6 37 w<PL, hard. (PP>4.5 tsf) - 20 (23.5 - 24.8) (SC) CLAYEY SAND, fine sand, low plastic fines; medium dark gray (N4); cohesive, very stiff. (PP~2.5 tsf) (24.8 - 25.0) SHALE - (CH) CLAY, high plastic; medium dark gray (N4); cohesive, w~PL, hard. (PP>4.5 tsf) 23.5 <u>27</u> <u>13</u> 9 1.5 1.5 SC 7 SPT 22 - 25 CH - 30 - 35 - 40

SCALE: 1 in = 5 ft

8

GLDR\_CO.GDT

EXIDE FRISCO.GPJ

1302086

RECORD OF BOREHOLE MWD

GOLDER STL

DRILLING CONTRACTOR: WEST Drilling

DRILLER: Bob Williams



#### RECORD OF BOREHOLE RCA-BH-4

PROJECT: Exide Frisco PROJECT NUMBER: 130-2086

DRILLING METHOD: DRILLING DATE: 7/13/2018

DATUM: Local AZIMUTH: N/A

SHEET 1 of 1 ELEVATION: N/A INCLINATION: -90

LO		N: Inside Flood Wall and STB DRI SOIL PROFILE	LL RIG:	Geopi	robe 782	2DT		COORDIN SAMPLES	IATES	8: N: N	I/A E: 1	N/A				
O DEPTH (feet)	BORING METHOD	DESCRIPTION  (0.0 - 1.0) CONCRETE and GRAVEL	nscs	GRAPHIC	ELEV. DEPTH (ft)	NUMBER	TYPE	BLOWS per 6 in 140 lb hammer 30 inch drop	N	REC ATT	PENE <sup>-</sup>	TRATIC BLOV		ft <b>=</b>		REMARKS
		(1.0 - 9.5) (CL) SILTY CLAY, low plastic, high silt content; olive black (5Y 2/1);			1.0											
		nigh slit content; olive black (5Y 2/1); cohesive, w~PL, very soft, sticky.				1	SPT	WH WH WH	WH	<u>1.5</u> 1.5						
5			CL			2	SPT	<u>WH</u> WH 1	1	<u>1.5</u> 1.5						
																RCA-BH-4 SH-3:
						3	SH	3		1.3 2.0						Hydraulic Conductivity 4.47e-7 cm/sec, Dry U Weight = 84.2 pcf
10		(9.5 - 10.0) (CL) gravelly CLAY, low plastic fines, fine to medium gravel; olive black (5Y 2/1); cohesive, w~PL, firm, sticky. (10.0 - 14.0) (CH) CLAY, high plastic; olive			9.5	4	SPT	3 3 3	6	1.5 1.5						
	HSA	black (5Y 2/1); cohesive, w~PL, firm.	СН			5	SH			<u>2.0</u> 2.0						RCA-BH-4 SH-5: UU = 2,400 psf, Dry Unit Weight = 95.3 pcf
15		(14.0 - 18.5) (CL) SILTY CLAY, low plastic; light olive gray (5Y 6/1) with light brown (5YR 5/6) marbling; cohesive, w <pl, (pp="" hard.="">4.5 tsf)</pl,>			14.0	6	SPT	4 8 17	25	<u>1.5</u> 1.5		ı	-			
		(	CL													
		(18.5 - 23.5) (CL) SILTY CLAY, low plastic, some fine grained sand; medium dark gray (N4); cohesive, w>PL, very stiff.			18.5	7	SPT	16 28 32	>50	1.5 1.5					>>	
20			CL													
		(23.5 - 25.0) SHALE - (CH) CLAY, high plastic; medium dark gray (N4); cohesive,	 CH		23.5	8	SPT	18 29 50	>50	1.5 1.5					>>	
25		w <pl, (pp="" hard.="">4.5 tsf)</pl,>						50		1.0						
30																
35																
40																
40 SCA	LE: 1	in = 5 ft				LO	GGE	D: PJJ								
		CONTRACTOR: WEST Drilling Bob Williams				CH	IECKI	ED: BCW /ED: KMB							(	<b>H</b> Golder Associate



RECORD OF BOREHOLE RCA-BH-5 SHEET 1 of 1 PROJECT: Exide Frisco PROJECT NUMBER: 130-2086 DRILLING METHOD: DRILLING DATE: 7/13/2018 DATUM: Local AZIMUTH: N/A ELEVATION: N/A INCLINATION: -90 LOCATION: Inside Flood Wall and WWTP DRILL RIG: Geoprobe 7822DT COORDINATES: N: N/A E: N/A SOIL PROFILE SAMPLES BORING METHOD DEPTH (feet) ELEV. PENETRATION RESISTANCE GRAPHIC LOG NUMBER BLOWS BLOWS / ft REMARKS DESCRIPTION per 6 in Ν DEPTH 140 lb hammer (ft) 20 30 - 0 (0.0 - 1.0) CONCRETE and GRAVEL (1.0 - 10.5) (CL) SILTY CLAY, low plastic; olive black (5Y 2/1); cohesive, w~PL, firm. (PP~1 tsf) 1.0 1.2 1.5 SPT 1 3 (3.5) Soil color changes to olive black (5Y 2/1) marbled with light olive gray (5Y 5/2) 3.5 1.1 1.5 2 SPT 4 CL - 5 (8.5 - 18.5) (CH) CLAY, high plastic 8.5 RCA-BH-5 SH-3: UU = moderate yellowish brown (10YR 5/4); cohesive, w~PL, stiff. (PP~1.5 tsf) 5,200 psf, Dry Unit Weight = 107.1 pcf SH 1.1 2.0 3 10 <u>1.5</u> 1.5 4 SPT 8 HSA RCA-BH-5 SH-5: Hydraulic Conductivity = 2.42e-8 cm/sec, Dry Unit Weight = 86 pcf 0.95 2.0 SH 5 - 15 (18.5 - 25.0) SHALE - (CH) CLAY, high plastic; medium dark gray (N4); cohesive, w<PL, hard. (PP~4.5 tsf) 18.5 15 25 36 1.5 1.5 SPT 6 >50 - 20 1.5 1.5 7 SPT >50 - 25 - 30 - 35 - 40 SCALE: 1 in = 5 ft LOGGED: PJJ

DRILLING CONTRACTOR: WEST Drilling

DRILLER: Bob Williams

8/13/18

GLDR\_CO.GDT

1302086 EXIDE FRISCO.GPJ

RECORD OF BOREHOLE MWD

GOLDER STL





DRILLING METHOD: Direct Push

NORTHING: 7,103,178 FT EASTING: 2,480,980 FT

DATE/TIME: 07/31/2018, 1353 - 1357

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 573.123 FT AMSL

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

TOTAL D	DEPTH:	8 FT BGS		RIG:_	Geoprob	e 7822D	SURFACE ELEVATION: 573.123 FT AMS
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
		40	<u>1.7</u> 1.7	(2-3)	CORE _GM		(0.0-1.7) CONCRETE. Fabric on bottom of core.  (1.7-2.0) (GM) SILTY GRAVEL, fine to medium sub-angular gravels, non-plastic fines; white (N9) gravels with dusky yellowish brown (10YR 2/2);
5	11	ND +/- 12 26	<u>2.0</u> 4.0	1424 (4-5) 1426	CL		non-cohesive, dry, loose.  (2.0-5.0) (CL) gravelly SILTY CLAY, medium-plasticity fines, fine to medium sub-angular to sub-rounded gravels; moderate yellowish brown (10YR 5/4) with light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
	2	ND +/- 12 ND +/- 12 17	<u>4.0</u> 4.0	(5-6) 1428	CL		(5.0-8.0) (CL) SILTY CLAY, high-plasticity fines, some fine sub-rounded gravels; medium light gray (N6) with dark yellowish orange (10YR 6/6) and light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
10				(TCLP Composit 1430	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
15							
20							
25							
30							
35							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West side of road - West of Tract H (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

DATE/TIME: 07/31/2018, 1249 - 1253 DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

NORTHING: 7,103,134 FT

EASTING: 2,480,967 FT

SURFACE ELEVATION: 578.466 FT AMSL

TOTALL		0 1 1 1 1 1 1 1		KIG.	Geopron	C TOZZE	SURFACE ELEVATION. 376.400 FT AWSL
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_			<u>1.5</u> 1.5		CORE		(0.0-1.5) CONCRETE.
-	4	19 48	2.0	(2-3) 1320	GM		(1.5-3.0) (GM) SILTY GRAVEL, fine to coarse sub-angular gravels, non-plastic fines; very pale orange (10YR 8/2) with dark yellowish brown (10YR 4/2); non-cohesive, dry, loose.
_ _5	1	ND +/- 7 ND +/- 8	4.0	(4-5) 1322	SP	1///	(3.0-5.0) (SP) SAND, very fine sand; dark yellowish orange (10YR 6/6); non-cohesive, dry, loose. Sand similar to that used when backfilling utilities.
-	2	ND+/- 12 - 25 15	<u>3.5</u> 4.0	(7-8)	CL 		(5.0-7.0) (CL) SILTY CLAY, medium-plasticity fines, trace fine sub-angular to sub-rounded gravels; dusky yellowish brown (10YR 2/2); cohesive, W <pl, (7.0-8.0)="" (cl)="" clay,="" fine="" fines,="" high-plasticity="" silty="" stiff.="" sub-angular="" td="" to<="" trace=""></pl,>
_		15		(7-8) 1324 (TCLP Composit			sub-rounded gravels; dark yellowish brown (10YR 4/2) with light olive gray (5Y 5/2) and dark gray (N3) mottling; cohesive, W <pl, 8.0="" at="" below="" boring="" end="" feet="" ground="" of="" stiff.="" surface.<="" td="" very=""></pl,>
- 10 -				1326			END OF BONNING AT 0.01 EET BEEOW GNOOND GON AGE.
_							
_ _ 15							
_							
- -							
- 20 -							
_							
- 25							
_							
_							
-30 -							
  -							
_ 35							
_							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West side of road - West of Tract H (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,103,128 FT

DATE/TIME: 07/30/2018, 1409 - 1413

DRILLER: West Drilling, Robert Williams

EASTING: 2,481,007 FT SURFACE ELEVATION: 570 142 ET AMSI

TOTAL DEPTH: 9.5 F	FT BGS
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RIG: Geonrobe 7822DT

TOTAL D	DEPTH:	9.5 FT BGS	<u> </u>	RIG:	Geoprob	e 7822D	SURFACE ELEVATION: 570.142 FT AMSI
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
, ,			1.2 1.2		CORE	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	(0.0-1.2) CONCRETE.
		24 ND +/- 11 22	3.0 4.0	(1-2) 1445 (3-4) 1446	CL		(1.2-4.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular gravels; light olive gray (5Y 5/2) with some dark gray (N3) mottling; cohesive, W <pl, firm.<="" td=""></pl,>
-5		13 11 ND +/- 10 14 ND +/- 11	<u>5.5</u> 5.5	(4-5) - 1448	CL		(4.0-9.5) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-rounded gravels, trace fine sand; very light gray (N8) with dark yellowish orange (10YR 6/6) and grayish brown (5Y 8/4); cohesive, W <pl, -="" 5.5="" all="" and="" attempt="" driller="" feet="" feet.<="" firm.="" first="" loose="" no="" of="" on="" pushes="" recovers="" recovery="" run="" says="" second="" td="" too="" wet.=""></pl,>
-10		ND 17-11		(TCLP Composit 1450, DUP-02	e)		END OF BORING AT 9.5 FEET BELOW GROUND SURFACE.
- 15							
- 20							
- 25							
30							
35							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East side of Road - West of Tract H (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,525 FT EASTING: 2,481,262 FT

DATE/TIME: 07/31/2018, 1053 - 1057

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 562.937 FT AMSL

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT SURFACE ELE

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
` '		` '	1.1		CORE	P 4 4 9	(0.0-1.1) CONCRETE.
-	4	ND +/- 10 ND +/- 14		(2-3) 1138	CL		(1.1-4.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular gravels; dark yellowish brown (10YR 4/2); cohesive, W <pl, stiff.<="" td=""></pl,>
	1	ND +/- 11 15	3.3 4.0	(4-5) 1140			(4.0-8.0) (CL) gravelly SILTY CLAY, high-plasticity fines, fine to medium
-5	2	ND +/- 12 ND +/- 10	<u>4.0</u> 4.0	(5-6) 1142	CL		(4.0-8.0) (CL) gravelly SILTY CLAY, high-plasticity fines, fine to medium sub-angular gravels; medium light gray (N6) with dark yellowish orange (10YR 6/6) and dark gray (N3) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
-		ND +/- 12		(TCLP		1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
- - 10 -				Composit 1144	e)		
- 15							
- 20							
- 25							
- 30							
- 35							
· - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West side of road - North Eagan Edge (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,556 FT

DATE/TIME: 07/30/2018, 1137 - 1140

DRILLER: West Drilling, Robert Williams

EASTING: 2,481,285 FT

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 562.452 FT AMSL

		0 1 1 1 1 1		KIG	Geoprob		SURFACE ELEVATION. 302.432 FT AWISL
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-			<u>1.5</u> 1.5	(1-2)	CORE	00000	(0.0-1.5) CONCRETE.
- - - -5	1	12 12 17 ND +/- 15	<u>3.4</u> 4.0	(3-4) 1220, DUP-01	CL		(1.5-4.5) (CL) SILTY CLAY, medium-plasticity fines; dark yellowish brown (10YR 4/2); cohesive, W <pl, (2.5)="" (4.0)="" (same="" above),="" as="" except="" fine="" gravels.="" saa="" saa,="" stiff.="" sub-angular="" trace="" w="" with="">PL.  (4.5-8.0) (CL) SILTY CLAY, high-plasticity fines, some fine sub-angular to</pl,>
- - -	2	13 ND +/- 15 ND +/- 13	<u>4.0</u> 4.0	(5-6) 1222 (TCLP	CL		sub-rounded gravels; very light gray (N8) with dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, 8.0="" at="" below="" boring="" end="" feet="" ground="" of="" stiff.="" surface.<="" td=""></pl,>
- 10 - -				Composit 1224	e)		END OF BOTHING AT C.O.T. ELT BLEOW GROOND GOTH AGE.
- 15 							
- - -20 -							
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- -30 - -							
- -35 - -							
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - North Eagan edge (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,478 FT

DATE/TIME: 07/31/2018, 1015 - 1020

DRILLER: West Drilling, Robert Williams

EASTING: 2,481,320 FT

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 563.085 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
. 551)	110.		0.7 0.7	(1-2)	CORE	0 4 4 9	(0.0-0.7) CONCRETE. (0.7-5.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular to
	1	13 ND +/- 15 ND +/- 14	<u>2.5</u> 4.0	(1-2) 1052 (3-4)	CL		sub-rounded gravels; dusky yellowish brown (10YR 2/2) with light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
5		ND +/- 12 ND +/- 11	4.0	1054, DUP-04 (5-6)			(5.0-8.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-rounded gravels; light gray (N7) with medium dark gray (N4) and dark yellowish
	2	ND +/- 10 ND +/- 11	<u>4.0</u> 4.0	1056	CL		gravels; light gray (N7) with medium dark gray (N4) and dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, (7.0)="" (n7)="" change="" color="" dark="" gray="" light="" mottling.<="" orange="" stiff.="" td="" to="" with="" yellowish=""></pl,>
-		110 17 11		(TCLP Composit 1058	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
10							
15							
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - South Eagan edge (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,508 FT EASTING: 2,481,345 FT

DATE/TIME: 07/30/2018, 1030 - 1100

DRILLER: West Drilling, Robert Williams

SUDENCE ELEVATION: 562 644 ET AMS

TOTAL DEDTH: 8 ET BGS

TOTAL D	DEPTH:	8 FT BGS		RIG:	Geoprob	e 7822E	SURFACE ELEVATION: 562.644 FT AMS
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1	ND +/- 9 ND +/- 11 14 ND +/- 11	0.7 0.7 3.8 4.0	(2-3) 1130	CORE		(0.0-0.7) CONCRETE.  (0.7-4.5) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular gravels; light olive gray (5Y 5/2) with dark gray (N3) mottling and white (N9) gravels; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
5	2	ND +/- 12 ND +/- 11 ND +/- 11 ND +/- 14	<u>2.3</u> 4.0	(4-5) 1132 (6-7) 1134	CL		(4.5-8.0) (CL) SILTY CLAY, high-plasticity fines, some fine sub-angular to sub-rounded gravels; very light gray (N8) with dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
10				(TCLP Composit 1136	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - South Eagan edge (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS

DATE/TIME: 07/30/2018, 1515 - 1521

RIG: Geoprobe 7822DT

NORTHING: 7,103,001 FT

EASTING: 2,481,032 FT

SURFACE ELEVATION: 564.849 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	25 16 13 13	3.6 4.0	(0-1) 1552 (1-2) 1554	CL		(0.0-4.0) (CL) SILTY CLAY, medium-plasticity fines, trace fine sub-angular gravels; dark gray (N3); cohesive, W <pl, stiff.<="" td="" very=""></pl,>
- 5		11 ND +/- 12	4 0		CL		(4.0-6.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular gravels; dark yellowish brown (10YR 4/2); cohesive, W <pl, stiff.<="" td="" very=""></pl,>
	2	ND +/- 12 ND +/- 15	<u>4.0</u> 4.0	(6-7) 1556	CL		(6.0-8.0) (CL) gravelly SILTY CLAY, high-plasticity fines, fine to medium sub-angular gravels; light olive gray (5Y 5/2) with some dark yellowish brown (10YR 4/2) mottling; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
10				(TCLP Composit 1600	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
15							
20							
25							
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - West of Tract H (in grass)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,675 FT EASTING: 2,481,177 FT

DATE/TIME: 07/30/2018, 1643 - 1648

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 561.742 FT AMSL

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT

**DEPTH** RUN **XRF** REC **DESCRIPTION AND COMMENTS** SAMPLE **USCS** (Feet) (PPM) (Feet) No. (0.0-5.5) (CL) gravelly SILTY CLAY, medium-plasticity fines, fine to medium 16 sub-angular to sub-rounded gravels; dark yellowish brown (10YR 4/2) with dark gray (N3) and pale yellowish brown (10YR 6/2) mottling; cohesive, 20 3.9 4.0 1 W<PL, stiff. B 12 CL (3-4) 1714 115 (3.5) 1 - inch layer of medium sub-angular pieces of asphalt. (4-5) 1716 ND +/- 14 - 5 (5.5-8.0) (CL) SILTY CLAY, high-plasticity fines; dark yellowish brown (10YR 4/2) with dusky yellowish brown (10YR 2/2) mottling and trace iron staining; cohesive, W<PL, firm. ND +/- 10 <u>4.0</u> 4.0 2 (6-7)ND +/- 11 CL 1718 ND +/- 10 (TCLP END OF BORING AT 8.0 FEET BELOW GROUND SURFACE. Composite) 1720 10 15 20 25 30 35

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - West of Tract G (in grass)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,571 FT EASTING: 2,481,284 FT

DATE/TIME: 07/31/2018, 0841 - 0846

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 562.816 FT AMSL

101712					Осоргов		
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- -	1	725 250 43 315	3.1 4.0	(0-1) 0922 (3-4) 0924	ML CL		(0.0-1.0) TOPSOIL (ML) SILT, non-plastic fines, trace roots and sub-angular coarse gravels; dusky yellowish brown (10YR 2/2); non-cohesive, dry, loose. (1.0-5.0) (CL) SILTY CLAY, medium-plasticity fines, some fine sub-angular to sub-rounded gravels; medium dark gray (N4) with light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
-5 -	2	ND +/- 18 28 42 51	4.0 4.0	(5-6) 0926, DUP-03	CL		(5.0-8.0) (CL) gravelly SILTY CLAY, high-plasticity fines, fine sub-angular to sub-rounded gravels; medium light gray (N6) with dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
- 10 				(TCLP Composit 0928	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
- - 15 							
- - -20 -							
- - - 25 -							
- - - 30 - -							
- - - 35 - -							
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - Southwest Tract G (in grass)	REVIEWED BY:	AMF



TOTAL DEPTH: 8 FT BGS

DATE/TIME: 07/31/2018, 1600 - 1604

# LOG OF 2018-PB-12

DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

RIG: Geoprobe 7822DT

NORTHING: 7,102,626 FT

EASTING: 2,481,146 FT

SURFACE ELEVATION: 563.276 FT AMSL

		0 1 1 1 1 1 1 1		RIG.	Geopron	O TOZZE	SURFACE ELEVATION. 503.270 FT AIVISL
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-		66 45	,	(0-1) 1640	ML	1/ 1/1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/ 1/	(0.0-2.0) TOPSOIL (ML) SILT, non-plastic fines, some fine to medium sub-angular gravels, roots; dark yellowish brown (10YR 4/2); non-cohesive, dry, loose.
-	1	15	3.1 4.0	(2-3) 1642	ML	.0.0	(2.0-3.5) (ML) gravelly SILT, non-plastic fines, fine to coarse sub-angular to angular gravels; very pale orange (10YR 8/2); non-cohesive, dry, loose.
- -5 -	2	26 ND +/- 16 24 19	<u>2.7</u> 4.0	(7-8)	CL		(3.5-7.5) (CL) SILTY CLAY, medium-plasticity fines, some fine sub-angular to sub-rounded gravels; dusky yellowish brown (10YR 2/2) with dark yellowish brown (10YR 4/2) and dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
-		19		1644 (TCLP	CL		(7.5-8.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular to sub-rounded gravels; moderate brown (5YR 4/4) with dark gray (N3) and
- 10 				Composit 1646	e)		light olive gray (5Y 5/2) mottling; cohesive, W <pl, 8.0="" at="" below="" boring="" end="" feet="" ground="" of="" stiff="" surface.<="" td="" very=""></pl,>
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - in grass	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS

DATE/TIME: 07/31/2018, 0936 - 0940

RIG: Geoprobe 7822DT

NORTHING: 7,102,536 FT

EASTING: 2,481,226 FT

SURFACE ELEVATION: 563.256 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
	1	88 ND +/- 11 13 14	3.2 4.0	(0-1) 1015	ML CL	311/2 311/	(0.0-0.8) TOPSOIL (ML) SILT, non-plastic fines, trace coarse angular gravels; dusky yellowish brown (10YR 2/2); non-cohesive, dry, loose.  (0.8-4.5) (CL) SILTY CLAY, medium-plasticity fines, some fine sub-angular to sub-rounded gravels; dark yellowish brown (10YR 4/2); cohesive, W <pl, stiff.<="" td=""></pl,>
- 5	2	23 ND +/- 18 19	<u>4.0</u> 4.0	(4-5) 1016 (5-6) 1018	CL		(4.5-6.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-angular gravels; light gray (N7) with dark yellowish orange (10YR 6/6) and light olive gray (5Y 5/2) mottling; cohesive, W <pl, (6.0-8.0)="" (cl)="" clay,="" fine="" fines,="" gravelly="" high-plasticity="" silty="" stiff.="" sub-angular="" td="" to<=""></pl,>
10		ND +/- 15		(TCLP Composit 1020	CL e)	A D	sub-rounded gravels; light gray (N7) with dark yellowish orange (10YR 6/6) and light olive gray (5Y 5/2) mottling; cohesive, W <pl, 8.0="" at="" below="" boring="" end="" feet="" ground="" of="" stiff.="" surface.<="" td=""></pl,>
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - North Eagan edge (in grass)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push NORTHING: 7,102,575 FT

DATE/TIME: 07/30/2018, 1227 - 1232 DRILLER: West Drilling, Robert Williams EASTING: 2,481,258 FT

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT SURFACE ELEVATION: 562.515 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
			<u>1.1</u> 1.1		CORE	A 4 A A	(0.0-1.1) CONCRETE.
	1	ND +/- 11 50 ND +/- 9	3.6 4.0	(2-3) 1305	CL		(1.1-4.5) (CL) SILTY CLAY, medium-plasticity fines, some fine sub-angular gravels; light olive gray (5Y 5/2) with trace dark gray (N3) mottling; cohesive W <pl, stiff.<="" td="" very=""></pl,>
_		15		(4-5) 1306		$\mathbb{A}$	(4.0) SAA (Same As Above), except W>PL.
5	2	ND +/- 14 ND +/- 14	<u>4.0</u> 4.0	(5-6) 1308	CL		(4.5-8.0) (CL) SILTY CLAY, high-plasticity fines, some fine sub-angular to sub-rounded gravels; medium gray (N5) with very light gray (N8) and dark yellowish orange (10YR 6/6) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
		ND +/- 12		(TCLP			END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
10				Composit 1310	e)		END OF BOTHING AT C.O.T. ELT. BELOW GROOND GOTH AGE.
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - Southwest Air Monitor (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push NORTHING: 7,102,634 FT

DATE/TIME: 07/30/2018, 1320 - 1325 DRILLER: West Drilling, Robert Williams EASTING: 2,481,204 FT

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT SURFACE ELEVATION: 562.701 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	
-			1.3 1.3		CORE		(0.0-1.3) CONCRETE.
-		12 119		(2-3)	CL	20	(1.3-2.5) (CL) gravelly SILTY CLAY, medium-plasticity fines, fine sub-angular to sub-rounded gravels; light olive gray (5Y 5/2); cohesive,
-	1	139	<u>2.5</u> 4.0	1354 (3-4)	CL		W>PL, stiff. (2.5-4.0) (CL) SILTY CLAY, high-plasticity fines; dark gray (N3); cohesive,
-5		ND +/- 10		1356	CL		\ W∼PL, stiff. \ (3.0) some fine pieces of sub-angular asphalt.
-	2	ND +/- 12 ND +/- 10	3.7 4.0	(5-6) 1358	CL		(4.0-4.5) (CL) SILTY CLAY, low-plasticity fines, some fine sub-angular gravels; light olive gray (5Y 5/2); cohesive, W>PL, firm.
		14					(4.5-8.0) (CL) SILTY CLAY, medium-plasticity fines, trace fine sub-rounded gravels; very light gray (N8) with dark yellowish orange (10YR 6/6) mottling;
				(TCLP Composit	e)		cohesive, W <pl, 8.0="" at="" below="" boring="" end="" feet="" ground="" of="" stiff.="" surface.<="" td=""></pl,>
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - West of Tract G (in road)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

DATE/TIME: 07/31/2018, 1148 - 1153 DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT

NORTHING: 7,102,618 FT

EASTING: 2,481,168 FT

SURFACE ELEVATION: 561.87 FT AMSL

101712		0 1 1 1 1 1 1		KIG.	Geoprob	O TOZZE	SURFACE ELEVATION. 501.67 FT AMSL
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
			1.0		CORE	P 4 4 P	(0.0-1.0) CONCRETE.
-		21	1.0	1	CL		(1.0-2.0) (CL) SILTY CLAY, medium-plasticity fines; dusky yellowish brown
-		42	2.5	(2-3) 1220	CL		(10YR 2/2); cohesive, W <pl, (10yr="" (2.0-3.0)="" (cl)="" 2);<="" 6="" brown="" clay,="" fines;="" firm.="" low-plasticity="" pale="" silty="" td="" very=""></pl,>
-	1	39	<u>3.5</u> 4.0	1220 (3-4)			cohesive. W <pl. firm.<="" td=""></pl.>
_		-		1222			(2.1) 2 - inch seam of medium sub-angular black (N1) asphalt and very pale orange (10YR 8/2) concrete pieces.
-5		12		-	CL		(3.0-7.5) (CL) SILTY CLAY, medium-plasticity fines, very trace fine
_	2	14	3.3 4.0		02		sub-angular gravels; dusky yellowish brown (10YR 2/2) with trace light olive
_		14	4.0				gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
_		ND +/- 12		(7-8) 1224			(7.5-8.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-rounded
				(TCLP	,		gravels; light olive gray (5Y 5/2) with dark yellowish orange (10YR 6/6) and light gray (N7) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
40				Composit	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - in road	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,920 FT EASTING: 2,481,038 FT

DATE/TIME: 07/30/2018, 1549 - 1553

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 562.856 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	43 49 115 144	3.1 4.0	(2-3) 1620 (3-4)			(0.0-8.0) (CL) gravelly SILTY CLAY, medium-plasticity fines, sub-angular to sub-rounded fine gravels; dusky yellowish brown (10YR 2/2) with light olive gray (5Y 5/2) mottling; cohesive, W <pl, (2.5)="" angular="" asphalt.<="" of="" pieces="" stiff.="" td=""></pl,>
5	2	16 ND +/- 10 ND +/- 11 ND +/- 11	3.8 4.0	1622 (5-6) 1624	CL		(4.0) color change to pale yellowish brown (10YR 6/2) with dark yellowish orange (10YR 6/6) and moderate yellowish brown (10YR 5/4) mottling.
10				(TCLP Composit 1626	e)		END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
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35							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	East Side of Road - West of Tract H (in grass)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,748 FT EASTING: 2,481,058 FT

DATE/TIME: 07/31/2018, 1653 - 1659

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 562.043 FT AMSL

TOTAL DEPTH: 10 FT BGS

RIG: Geoprobe 7822DT

TOTAL D	DEPTH:	10 FT BGS		RIG:_	Geoprob	e 7822D	T SURFACE ELEVATION: 562.043 FT AMS
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	99 26 ND +/- 11	<u>2.2</u> 4.0	(0-1) 1728	ML 		(0.0-3.0) TOPSOIL (ML) SILT, non-plastic fines, some fine sub-angular gravels and roots; dusky yellowish brown (10YR 2/2); non-cohesive, dry, loose.  (1.0) color change to very pale orange (10YR 8/2).  (3.0-6.8) (CL) gravelly SILTY CLAY, high-plasticity fines, fine to medium
- 5	2	97 174 18	3.2 4.0	(5-6) 1730	CL		sub-angular gravels; dark yellowish brown (10YR 4/2) with dark gray (N3) and light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td=""></pl,>
10	3	ND +/- 16 17 21	<u>1.6</u> 2.0	(8-9) 1732	CL		(6.8-10.0) (CL) SILTY CLAY, high-plasticity fines, trace fine sub-rounded gravels; dark gray (N3) with moderate brown (5YR 4/4) and light olive gray (5Y 5/2) mottling; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
10				(TCLP Composit 1734	e)		END OF BORING AT 10.0 FEET BELOW GROUND SURFACE.
- 15							
20							
25							
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PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - in grass	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

DATE/TIME: 07/31/2018, 1520 - 1525 DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 8 FT BGS RIG: Geoprobe 7822DT

NORTHING: 7,102,818 FT

EASTING: 2,481,034 FT

SURFACE ELEVATION: 563.778 FT AMSL

DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(i ddi)	1	134 37 16 ND +/- 10	3.5 4.0	(0-1) 1616	ML ML		(0.0-0.5) TOPSOIL (ML) SILT, non-plastic fines, some fine to medium sub-angular gravels, roots; dark yellowish brown (10YR 4/2); non-cohesive, dry, loose.  (0.5-3.5) (ML) gravelly SILT, non-plastic fines, fine to medium sub-angular to sub-rounded gravels; very pale orange (10YR 8/2); non-cohesive, dry, loose.  (3.5-4.0) (CL) SILTY CLAY, high-plasticity fines; dusky yellowish brown
5	2	29 308 342 277	<u>3.7</u> 4.0	(6-7) 1605 (7-8)	CL		(3.5-4.0) (CL) SILTY CLAY, nign-plasticity fines; dusky yellowish brown (10YR 2/2) with moderate brown (5YR 4/4) mottling and iron staining; cohesive, W <pl, (10yr="" (4.0-7.0)="" (7.0-8.0)="" (cl)="" 2)="" 4="" 6="" 6)="" brown="" clay,="" cohesive,="" dark="" fine="" fines,="" gravelly="" gravels;="" high-plasticity="" medium="" medium-plasticity="" mottling;="" orange="" silty="" some="" stiff.="" sub-angular="" sub-rounded<="" td="" to="" trace="" w<pl,="" with="" yellowish=""></pl,>
10				1606 (TCLP Composit 1620	e)		gravels; dusky yellowish brown (10YR 2/2) with moderate brown (5YR 4/4) and grayish orange (10YR 7/4) mottling; cohesive, W <pl, (7.1)="" (7.9)="" 8.0="" asphalt.="" at="" below="" boring="" end="" feet="" glass.="" ground="" of="" pieces="" shard="" small="" stiff.="" surface.<="" td="" very=""></pl,>
15							
20							
25							
30							
35							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - in grass	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push

NORTHING: 7,102,884 FT EASTING: 2,481,003 FT

DATE/TIME: 07/31/2018, 1443 - 1447

DRILLER: West Drilling, Robert Williams

TOTAL [	DEPTH:	8 FT BGS		RIG:	Geoprob	e 7822	OT SURFACE ELEVATION: 564.164 FT AMSL
DEPTH (Feet)	RUN No.	XRF (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1	162 42 ND +/- 11	2.5 4.0	(0-1) 1514	MLML		(0.0-0.5) TOPSOIL (ML) SILT, non-plastic fines, some fine sub-angular gravels; dusky yellowish brown (10YR 2/2); non-cohesive, dry, loose. (0.5-4.0) (ML) gravelly SILT, non-plastic fines, fine to coarse sub-angular to sub-rounded gravels; very pale orange (10YR 8/2); non-cohesive, dry, loose.
- -5 -	2	58 ND +/- 14 ND +/- 13	<u>3.5</u> 4.0	(4-5) 1516	CL		(4.0-8.0) (CL) gravelly SILTY CLAY, high-plasticity fines, fine sub-angular to sub-rounded gravels; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td=""></pl,>
_ _ _ 10		ND +/- 11		(7-8) 1518 (TCLP Composit 1520	e)		(7.0) color change to moderate yellowish brown (10YR 5/4) with dark yellowish brown (10YR 4/2) mottling. (7.5) color change to grayish orange (10YR 7/4) with dark yellowish orange (10YR 6/6) mottling.  END OF BORING AT 8.0 FEET BELOW GROUND SURFACE.
_ _ _ _ _ 15							
_ _ _ _ 20 _							
- - - - 25							
- - - 30							
- - - -35							
_ _ _							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	EMS
LOCATION:	West Side of Road - West of Tract G (in grass)	REVIEWED BY:	AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,101,738 FT

DATE/TIME: 5/15/2018, 0950 - 1020

DRILLER: West Drilling, Gus Alejandre

EASTING: 2,480,600 FT

TOTAL DEPTH: 30 FT BGS RIG: CME-75 SURFACE ELEVATION: 635.52 FT AMSL **DEPTH** RUN PID **REC** GRAPHIC LOG SAMPLE USCS **DESCRIPTION AND COMMENTS** (PPM) (Feet) No. (Feet) (0.0-5.0) (ML) SILT, non-plastic fines, trace fine sand; moderate yellowish brown (10YR 5/4); non-cohesive, dry, loose. (1.0) No fine sand, soil color changes to dark yellowish brown (10YR 4/2). <u>4.5</u> 5.0 ML 1 5 (5.0-10.0) (ML) sandy SILT, non-plastic fines, fine sand, trace fine sub-angular gravel; dark yellowish brown (10YR 4/2); non-cohesive, dry, <u>1.5</u> 5.0 2 ML 10 (10.0-15.0) (CL) gravelly SILTY CLAY, low plastic fines, fine to coarse well graded sub-angular gravel; brownish gray (5YR 4/1); cohesive, W<PL, firm. <u>5.0</u> 5.0 3 CL 15 CL (15.0-15.5) (CL) SILTY CLAY, medium plastic fines, trace fine sub-angular gravel; brownish gray (5YR 4/1); cohesive, W~PL, soft. (15.5-20.0) (CH) CLAY, high plastic fines; brownish gray (5YR 4/1) with moderate yellowish brown (10YR 5/4) mottling, iron staining; cohesive, 2.0 5.0 4 СН W<PL, stiff. (19.5) Soil color changes to dark gray (N3). 20 (20.0-30.0) SHALE; dark gray (N3); dry, very stiff. 3.5 5.0 5 25 (25.0) Shale becomes medium light gray (N4). <u>5.0</u> 5.0 6 30 END OF BORING AT 30 FEET BELOW GROUND SURFACE. 35

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	Near Flood Wall and Admin Building	REVIEWED BY:	THR/AMF



DATE/TIME: 5/15/2018, 1140 - 1220

# **LOG OF DGW-MW-2**

DRILLING METHOD: Direct Push/HSA

DRILLER: West Drilling, Gus Alejandre

TOTAL DEPTH: 20 FT BGS RIG: CME-75

NORTHING. 7,101,0

NORTHING: 7,101,676 FT

EASTING: 2,480,415 FT

SURFACE ELEVATION: 634.45 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - -	1		3.8 5.0		CL		(0.0-0.3) CONCRETE.  *approximately 3" of subgrade gravel fill.  (0.3-5.0) (CL) SILTY CLAY, low plastic fines, trace fine sub-rounded gravel; brownish black (5YR 2/1); cohesive, W <pl, stiff.<="" td=""></pl,>
5   	2		<u>1.1</u> 5.0		CL		(5.0-10.0) (CL) SILTY CLAY, low plastic fines; brownish black (5YR 2/1); cohesive, W <pl, *driller="" clays<="" due="" poor="" recovery="" reports="" stiff.="" td="" to=""></pl,>
– 10 - -			23		CH		(10.0-12.5) (CH) sandy CLAY, high plastic fines, fine sand; brownish gray (5YR 4/1); cohesive, W~PL, stiff.
-	3		2.3 5.0		СН		(12.5-15.0) (CH) gravelly CLAY, high plastic fines, fine sub-rounded to sub-angular gravel, some fine sand; pale yellowish brown (10YR 6/2); cohesive, W~PL, very stiff.
– 15 - -	4		<u>5.0</u>		CL		(15.0-17.5) (CL) gravelly SILTY CLAY, low plastic fines, fine to medium well graded sub-rounded gravel; pale yellowish brown (10YR 6/2); cohesive, W>PL, very stiff.
- - - 20	4	<u>5.0</u> 5.0		CL		(17.5-19.0) (CL) SILTY CLAY, low plastic fines, trace fine sand; dark gray (N3) with moderate yellowish brown (10YR 5/4) mottling, iron staining; cohesive W <pl, (19.0-20.0)="" (n3),="" dark="" dry,="" gray="" shale;="" stiff.="" stiff.<="" td="" very=""></pl,>	
-							END OF BORING AT 20 FEET BELOW GROUND SURFACE.
- - 25 - -							
- - - 30 -							
- - - 35 - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of Former Lead Oxide Tank	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,101,694 FT EASTING: 2,480,288 FT

DATE/TIME: 5/15/2018, 1540 - 1620

DRILLER: West Drilling, Gus Alejandre

SURFACE ELEVATION: 633.68 FT AMSL

TOTAL DEPTH: 20 FT BGS

RIG: CME-75

IOTALL	JEP I H:	20 FT BGS		RIG:_	CME-75		SURFACE ELEVATION: 633.68 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - - - -5	1		<u>4.0</u> 5.0		СН		(0.0-0.4) CONCRETE.  *approximately 3" of subgrade gravel fill.  (0.4-7.5) (CH) CLAY, high plastic fines; brownish black (5YR 2/1), hydrocarbon staining and mild odor; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
_	2		<u>2.5</u> 5.0				(7.5-10.0) (CL) SILTY CLAY, low plastic fines, some fine sand; brownish gray (5YR 4/1); cohesive, W>PL, soft.
10   	3		<u>5.0</u> 5.0		СН		(10.0-14.6) (CH) CLAY, high plastic fines, trace fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
15  	4		<u>5.0</u> 5.0		CH CH		(14.6-15.0) (CH) gravelly CLAY, high plastic fines, fine to medium well graded sub-rounded to rounded gravel; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.  (15.0-19.0) (CH) CLAY, high plastic fines, trace fine sand; brownish gray (5YR 4/1) with pale yellowish brown (10YR 6/2) mottling, iron staining; cohesive, W <pl, stiff.<="" td="" very=""></pl,>
-20							(19.0-20.0) SHALE; dark gray (N3); dry, stiff.
- - - -25 - -							END OF BORING AT 20 FEET BELOW GROUND SURFACE.
-30 - - - -35 - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of Former Diesel Tank	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,101,711 FT EASTING: 2,480,132 FT

DATE/TIME: 5/15/2018, 1350 - 1440

DRILLER: West Drilling, Gus Alejandre

TOTAL DEPTH: 20 FT BGS RIG: CME-75 SURFACE ELEVATION: 632.50 FT AMSL **DEPTH** RUN PID **REC** SAMPLE **USCS DESCRIPTION AND COMMENTS** (PPM) (Feet) No. (Feet) (0.0-0.5) CONCRETE. \*approximately 3" of subgrade gravel fill. 3.6 5.0 (0.5-5.0) (CH) CLAY, high plastic fines; brownish gray (5YR 2/1), heavy 1 СН hydrocarbon odor and staining; cohesive, W<PL, stiff. (2.5) 1 inch seam of fine to coarse well graded sub-rounded gravel. (5.0-14.5) (CH) CLAY, high plastic fines; brownish gray (5YR 4/1); cohesive, <u>1.7</u> 5.0 2 10 <u>2.8</u> 5.0 3 (14.5-15.0) (CH) gravelly CLAY, high plastic fines, fine to medium sub-angular gravel; brownish gray (5YR 4/1); cohesive, W~PL, very stiff. СН 15 (15.0-19.0) (CH) CLAY, high plastic fines, trace fine sand; dark gray (N3) with moderate yellowish brown (10YR 5/4) & brownish gray (5YR 4/1) СН <u>5.0</u> 5.0 mottling, iron staining; cohesive, W~PL, very stiff to hard. (19.0-20.0) SHALE; dark gray (N3); dry, very stiff. 20 END OF BORING AT 20 FEET BELOW GROUND SURFACE. 25 30 35

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	Flood Wall Apex; Near Former French Drain	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

ct Push/HSA NORTHING: 7,102,077 FT

DATE/TIME: 5/16/2018, 0910 - 0945

DRILLER: West Drilling, Gus Alejandre

EASTING: 2,479,632 FT

TOTAL DEPTH: 20 FT BGS RIC

RIG: CME-75

SURFACE ELEVATION: 626.99 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1	(FFIM)	3.8 5.0		СН		(0.0-5.0) (CH) CLAY, high plastic fines, trace fine sand; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td=""></pl,>
-5 - - -	2		<u>2.2</u> 5.0		CL		(5.0-10.0) (CL) SILTY CLAY, low plastic fines, some fine to medium sub-angular gravel; dark yellowish brown (10YR 4/2); cohesive, W>PL, firm.
- 10 - - -	3		<u>2.6</u> 5.0		СН		(10.0-16.0) (CH) gravelly sandy CLAY, high plastic fines, fine to coarse well-graded sub-angular to sub-rounded gravel, fine sand; pale yellowish brown (10YR 6/2); cohesive, W>PL, very stiff.
- 15 -							(15.0) Soil color changes to brownish gray (5YR 4/1).
_	4		<u>5.0</u> 5.0		СН		(16.0-18.0) (CH) CLAY, high plastic fines, trace fine sand; medium gray (N5), cohesive, W~PL, very stiff.
_ _ _ 20			5.0		SHALE		(18.0-20.0) SHALE; dark gray (N3), moist, very stiff.
- - - - -25							END OF BORING AT 20 FEET BELOW GROUND SURFACE.
- -30 - -							
- - 35 - - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	West of Former Battery Storage Building	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

DRILLER: West Drilling, Gus Alejandre

TOTAL DEPTH: 30 FT BGS

DATE/TIME: 5/16/2018, 1040 - 1130

RIG: CME-75

NORTHING: 7,102,081 FT

EASTING: 2,479,880 FT

SURFACE ELEVATION: 640.42 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-	1		2.2		ML		(0.0-2.5) gravelly sandy SILT, non-plastic fines, fine to coarse well graded sub-rounded to sub-angular gravel, fine sand; dark yellowish brown (10YR 4/2); non-cohesive, dry, loose.
	1		<u>2.2</u> 5.0		СН		(2.5-5.0) (CH) CLAY, high plastic fines, trace fine sand; dark yellowish brown (10YR 4/2); cohesive, W <pl, stiff.<="" td=""></pl,>
- 5 - -	2		<u>5.0</u> 5.0		СН		(5.0-10.0) (CH) CLAY, high plastic fines, trace sub-rounded gravel; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td="" very=""></pl,>
- 10 - -			5.0	CH CH			(10.0-12.5) (CH) CLAY, high plastic fines, trace fine sub-rounded gravels, trace fine sand; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td="" very=""></pl,>
	3		<u>5.0</u> 5.0		CL		(12.5-15.0) (CL) SILTY CLAY, low plastic fines, trace fine sand; pale yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td=""></pl,>
- 15 - - -	4		<u>2.5</u> 5.0		CL		(15.0-20.0) (CL) sandy SILTY CLAY, low plastic fines, fine sand; brownish gray (5YR 4/1); cohesive, W~PL, firm.
- 20 - -			5.0		CH		(20.0-22.5) (CH) CLAY, high plastic fines, some fine to coarse well graded sub-rounded to sub-angular gravels, some fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
- - - 25	5		<u>5.0</u> 5.0				(22.5-29.6) (CH) gravelly CLAY, high plastic fines, fine to medium well graded sub-rounded to rounded gravels, some fine sand; pale yellowish brown (10YR 6/2) with moderate yellowish brown (10YR 5/4) mottling, iron staining; cohesive, W~PL, very stiff.
-	6		<u>5.0</u> 5.0		СН		
- 30 - -							(29.6-30.0) SHALE; dark gray (N3), dry, very stiff. END OF BORING AT 30 FEET BELOW GROUND SURFACE.
- 35 - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of North Disposal Area	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

DRILLER: West Drilling, Gus Alejandre

TOTAL DEPTH: 30 FT BGS

DATE/TIME: 5/16/2018, 1300 - 1400

RIG: CME-75

NORTHING: 7,102,104 FT

EASTING: 2,479,782 FT

SURFACE ELEVATION: 639.95 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		<u>1.3</u> 5.0		CL		(0.0-5.0) (CL) gravelly SILTY CLAY, low plastic fines, fine to coarse sub-rounded to sub-angular gravel, trace fine sand; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td=""></pl,>
- 5 - - - - 10	2		<u>5.0</u> 5.0				(5.0-19.0) (CL) SILTY CLAY, low plastic fines, trace fine sand, trace fine sub-rounded to rounded gravel; dusky yellowish brown (10YR 2/2); cohesive, W <pl, stiff.<="" td="" very=""></pl,>
	3		<u>5.0</u> 5.0		CL		
- 15	4		<u>4.5</u> 5.0		CH		(15.0) No gravel  (19.0-20.0) (CH) sandy CLAY, high plastic fines, fine sand; brownish gray
- 20	5		<u>5.0</u> 5.0		СН		(5YR 4/1); cohesive, W~PL, firm. (20.0-22.5) (CH) CLAY, high plastic fines, trace fine sub-rounded to rounded gravel, trace fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
- 25			5.0	-	СН		(22.5-23.0) (CH) gravelly CLAY, high plastic fines, fine to coarse well graded sub-rounded to sub-angular gravel, trace fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.  (23.0-28.0) (CH) CLAY, high plastic fines, trace fine rounded gravel, trace fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
	6		<u>5.0</u> 5.0		СП		(28.0-29.5) (CH&GW) CLAY and GRAVEL, high plastic fines, fine to coarse
-30					СН		well graded sub-rounded to sub-angular gravel, trace fine sand; pale yellowish brown (10YR 6/2); cohesive, W>PL, very stiff.  \(\)\((29.5-30.0)\)\)\(SHALE;\)\)\(dark\)\(gray\)\((N3)\)\(moist\)\(very\)\(stiff\)\(END\)\(OF\)\(BORING\)\(AT\)\(30\)\(FET\)\(BELOW\)\(GROUND\)\(SURFACE\).
- 35							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of North Disposal Area	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,102,210 FT EASTING: 2,479,511 FT

DATE/TIME: 5/17/2018, 0920 - 1045

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 640.26 FT AMSL

TOTAL DEPTH: 30 FT BGS

RIG: Geoprobe 7822DT

TOTAL I	DEPTH:	30 FT BGS		RIG:	Geoprob	e 7822D	T SURFACE ELEVATION: 640.26 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1-1-1)	1	(****)	3.0 5.0		CL		(0.0-1.0) (CL) SILTY CLAY, low plastic fines, some fine sand, trace medium sub-angular gravels; dusky yellowish brown (10YR 2/2) with dark yellowish brown (10YR 4/2) and moderate yellowish brown (10YR 5/4) mottling; cohesive, W <pl, (1.0-5.0)="" (10yr="" (cl)="" 2="" 2);="" brown="" clay,="" cohesive,="" dusky="" fine="" fines,="" firm.="" firm.<="" low="" plastic="" sand;="" silty="" td="" trace="" w<pl,="" yellowish=""></pl,>
5	2		<u>1.0</u> 5.0		CL		(5.0-10.0) (CL) SILTY CLAY, low plastic fines, trace fine sand; dusky yellowish brown (10YR 2/2); cohesive, W <pl, soft.<="" td=""></pl,>
10	3		<u>5.0</u> 5.0				(10.0-20.0) (CL) SILTY CLAY, low plastic fines, trace fine sand; dusky yellowish brown (10YR 2/2) with some medium gray (N5) mottling; cohesive, W <pl, firm.<="" td=""></pl,>
15	4		<u>5.0</u> 5.0		CL		(19.0) Some fine sand; brownish gray (5YR 4/1); soft.
20	5		<u>5.0</u> 5.0		СН		(20.0-24.6) (CH) CLAY, high plastic fines, trace fine sand; olive gray (5Y 4/1 to brownish gray (5YR 4/1); cohesive, W <pl, stiff.<="" td=""></pl,>
25	6		<u>5.0</u> 5.0		СН		(24.6-25.0) (CH) gravelly CLAY, high plastic fines, fine to medium well graded sub-rounded gravel; olive gray (5Y 4/1) to brownish gray (5YR 4/1); cohesive, W <pl, (25.0-30.0)="" (5y="" (ch)="" *shale="" 1),="" 4="" clay,="" coarse="" cohesive,="" endcap.<="" fine="" fines,="" graded="" gravelly="" gravels,="" gray="" high="" in="" iron="" olive="" plastic="" present="" sand;="" some="" staining;="" stiff.="" sub-rounded="" td="" to="" very="" well="" w~pl,=""></pl,>
30							END OF BORING AT 30 FEET BELOW GROUND SURFACE.

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of Slag Landfill; Along RR	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING. 7,

NORTHING: 7,101,771 FT

DATE/TIME: 5/16/2018, 1535 - 1605

DRILLER: West Drilling, Gus Alejandro

EASTING: 2,480,655 FT

TOTAL DEPTH: 25 FT BGS

RIG: CME-75

SURFACE ELEVATION: 642.22 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - - - -5	1		3.0 5.0		SC		(0.0-9.0) (SC) CLAYEY SAND, fine sand, low to medium plastic fines; moderate brown (5YR 3/4); non-cohesive, dry, compact.
- - -	2		3.0 5.0		CH		(5.0) Increasing fines content  (9.0-10.0) (CH) sandy CLAY, high plastic fines, fine sand; dark yellowish
10  	2		5.0		CH		brown (10YR 4/2); cohesive, W <pl, (10.0-12.5)="" (10yr="" (ch)="" 2="" 2);="" brown="" clay,="" cohesive,="" dusky="" fine="" fines,="" high="" plastic="" sand;="" stiff.="" stiff.<="" td="" trace="" w<pl,="" yellowish=""></pl,>
- - 15	3		<u>5.0</u> 5.0		CH		(12.5-15.0) (CH) sandy CLAY, high plastic fines, fine sand; brownish gray (5YR 4/1); cohesive, W <pl, soft.<="" td=""></pl,>
-					СН		(15.0-16.0) (CH) sandy CLAY, high plastic fines, fine sand; brownish gray (5YR 4/1); cohesive, W <pl, stiff.<="" td=""></pl,>
-	4		<u>5.0</u> 5.0		СН		(16.0-20.0) (CH) gravelly CLAY, high plastic fines, fine to coarse well graded sub-rounded to sub-angular gravel, some fine sand; brownish gray (5YR 4/1), iron staining; cohesive, W~PL, stiff.
20 					CH		(20.0-22.0) (CH) sandy CLAY, high plastic fines, fine sand, some fine sub-rounded to rounded gravel; brownish gray (5YR 4/1); cohesive, W~PL, soft.
-	5		<u>5.0</u> 5.0		СН		(22.0-24.0) (CH) sandy gravelly CLAY, high plastic fines, fine sand, fine to coarse well graded gravel; pale yellowish brown (10YR 6/2); cohesive, W~PL, very stiff.  (24.0-25.0) SHALE; dark gray (N3); moist, very stiff.
25  							END OF BORING AT 25 FEET BELOW GROUND SURFACE.
- 30 - -							
- 35 - - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	Near Admin Building	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

.....

NORTHING: 7,101,804 FT

DATE/TIME: 5/18/2018, 0900 - 1000

DRILLER: West Drilling, Robert Williams

EASTING: 2,479,984 FT

TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 631.97 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 661)	140.	(1 1 101)	(1 001)			P 6 9 P	(0.0-0.6) CONCRETE.
- - - -5	1		<u>1.0</u> 5.0		CL		*approximately 3" of subgrade gravel fill.  (0.6-5.0) (CL) SILTY CLAY, low plastic fines, some medium sub-angular gravels, trace fine sand; brownish black (5YR 2/1); cohesive, W <pl, soft.<="" td=""></pl,>
-	0		2.6		CL		(5.0-7.5) (CL) gravelly SILTY CLAY, low plastic fines, medium to coarse sub-angular to angular gravels, trace fine sand; brownish gray (5YR 4/1); cohesive, W>PL, very stiff.
_	2		<u>2.6</u> 5.0				(7.5-13.0) (CH) CLAY, high plastic fines, trace fine sand; brownish gray (5YR 4/1) cohesive, W~PL, stiff.
- 10 - -	3		3.8 5.0		СН		(10.0) Soil water content becomes greater than plastic limit.
_			5.0		СН		(13.0-14.5) (CH) CLAY, high plastic fines, some fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
- 15 -	4		<u>1.0</u> 1.0		CH CH		(14.5-15.0) (CH) CLAY, high plastic fines, some fine to coarse sub-rounded to sub-angular well graded gravel, some fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
_	5		<u>4.0</u> 4.0		SM		(15.0-16.0) (CH) CLAY, high plastic fines, some fine sand, trace fine to medium sub-angular to angular gravels; brownish gray (5YR 4/1); cohesive, W>PL, firm.
_ 20			4.0		СН		(16.0-18.0) (SM) SILTY SAND, fine sand, non-plastic fines; brownish gray (5YR 4/1); non-cohesive, wet, dense.
_							*Driller encounters hard drilling section at 16.5 ft BGS  (18.0-19.5) (CH) CLAY, high plastic fines, trace fine sand; medium gray (N5); cohesive, W~PL, very stiff.
_ _ _ 25							(19.5-20.0) SHALE; dark gray (N3); moist, very stiff.  END OF BORING AT 20 FEET BELOW GROUND SURFACE.
-							
- 30 - -							
- -35 - -							
_							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of Slag Treatment Building	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,101,802 FT DRILLER: West Drilling, Robert Williams EASTING: 2,479,986 FT

TOTAL DEPTH: 10 FT BGS

DATE/TIME: 5/18/2018, 1150 - 1233

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 631.90 FT AMSL

TOTAL	DEPTH:	10 FT BGS		RIG:	Geoprob	e 7822D	T SURFACE ELEVATION: 631.90 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - - -5	1		<u>1.6</u> 5.0		ML		(0.0-0.6) CONCRETE.  *approximately 3" of subgrade gravel fill.  (0.6-2.5) (ML) sandy gravelly SILT, non-plastic fines, fine sand, fine to medium well graded sub-angular gravel; brownish gray (5YR 4/1) fines with grayish black (N2) sand; non-cohesive, wet, compact.  (2.5-5.0) (CH) CLAY, high plastic fines, some fine sand; brownish black (5YR 2/1); cohesive, W~PL, firm.
	2		<u>5.0</u> 5.0		SM CH CH		(5.0-5.5) (SM) SILTY SAND, fine sand, non-plastic fines, trace fine to medium sub-angular gravels; brownish black (5YR 2/1); non-cohesive, wet, compact.  (5.5-6.0) (CH) CLAY, high plastic fines, some fine sand; brownish black (5YR 2/1); cohesive, W~PL, firm.  (6.0-10.0) (CH) CLAY, high plastic fines, trace fine sand; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
- 10 - - -							END OF BORING AT 10 FEET BELOW GROUND SURFACE.
- 15 - - -							
- 20 - -							
- 25 - - -							
-30 -							
- - 35 - -							
		130 2086					COMPILED BY: BCW

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of Slag Treatment Building	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

NORTHING: 7,101,855 FT EASTING: 2,479,920 FT

DATE/TIME: 5/18/2018, 1400 - 1607

DRILLER: West Drilling, Robert Williams

SURFACE ELEVATION: 631.76 FT AMSL

TOTAL DEPTH: 17 FT BGS RIG: Geoprobe 7822DT

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
(1 661)	140.	(1 1 101)	(1 001)			P 6 4 P	(0.0-0.6) CONCRETE.
_	1		<u>1.0</u> 5.0		SM		*approximately 3" of subgrade gravel fill.  (0.6-5.0) (SM) SILTY SAND, fine sand, non-plastic fines; mix of moderate yellowish brown (10YR 5/4) and dusky yellowish brown (10YR 2/2); non-cohesive, wet, loose.
-5 - -	2		<u>2.9</u> 5.0		СН		(5.0-7.5) (CH) sandy CLAY, high plastic fines, fine sand, trace medium sub-angular gravels; dusky yellowish brown (10YR 2/2); cohesive, W>PL, soft.
_ _ _ 10	2		5.0		СН		(7.5-10.0) (CH) CLAY, high plastic fines, trace fine sand; brownish black (5YR 2/1); cohesive, W~PL, stiff.
_	3		<u>4.5</u> 5.0		СН		(10.0-14.0) (CH) gravelly CLAY, high plastic fines, fine to coarse well graded sub-angular gravel, trace fine sand; dark yellowish brown (10YR 4/2); cohesive, W>PL, stiff.
<u> </u>					CH		(14.0-15.0) (CH) CLAY, high plastic fines, trace fine sand, trace medium sub-angular gravels; brownish gray (5YR 4/1); cohesive, W~PL, very stiff.
	2		<u>5.0</u> 1.0		CL		(15.0-16.0) (CL) SILTY CLAY, medium plastic fines, trace fine sand, trace
				,	CL		medium sub-angular gravels; brownish gray (5YR 4/1); cohesive, W>PL, soft.
- 20 -							(16.0-17.0) (CL) SILTY CLAY, medium plastic fines, some fine sand, trace fine sub-angular gravels; pale yellowish brown (10YR 6/2); cohesive, W>PL, very stiff.  REFUSAL AT 17 FEET BELOW GROUND SURFACE.
- <b>25</b> 							
-30 - - -							
- 35 - - - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of WWTP	REVIEWED BY:	THR/AMF



DRILLING METHOD: Direct Push/HSA

\_\_\_\_

NORTHING: 7,101,854 FT

DATE/TIME: 5/18/2018, 1630 - 1710

DRILLER: West Drilling, Robert Williams

EASTING: \_2,479,922 FT SURFACE ELEVATION: 631.78 FT AMSL

TOTAL D	DEPTH:	10 FT BGS		RIG:	Geoprob	e 7822D	SURFACE ELEVATION: 631.78 FT AMSL
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - -	1		<u>2.1</u> 5.0		ML SM CH		(0.0-0.6) CONCRETE.  *approximately 3" of subgrade gravel fill.  (0.6-1.5) (ML) SILT, non-plastic fines, some fine to medium sub-rounded gravels, some fine sand; medium gray (N5) with white (N9) gravel; non-cohesive, dry, loose.  (1.5-2.5) (SM) SILTY SAND, fine sand, non-plastic fines, trace fine sub-angular gravel; moderate yellowish brown (10YR 5/4) with black (N1)
-5 - - -	2		<u>5.0</u> 5.0		ML		gravel; non-cohesive, moist, compact.  (2.5-5.0) (CH) CLAY, high plastic fines, trace fine sand; brownish black (5YR 2/1); cohesive, W~PL, firm.  (5.0-6.0) (ML) sandy SILT, non-plastic fines, fine sand, some fine to medium sub-angular gravel; dark gray (N3); non-cohesive, wet, compact.  (6.0-9.0) (CH) CLAY, high plastic fines, trace fine sand; gradation from brownish black (5YR 2/1) to pale yellowish brown (10YR 6/2); cohesive,
10  					CH		(9.0-10.0) (CH) gravelly CLAY, high plastic fines, fine to coarse well graded sub-rounded to sub-angular gravels; pale yellowish brown (10YR 6/2); cohesive, W <pl, 10="" at="" below="" boring="" end="" feet="" ground="" of="" stiff.="" surface.<="" td="" very=""></pl,>
15 							
- - 20 - -							
- 25 - -							
- -30 - -							
- -35 - - -							

PROJECT No:	130-2086-06	COMPILED BY:	BCW
PROJECT:	Exide Frisco	CHECKED BY:	PJJ
LOCATION:	South of WWTP	REVIEWED BY:	THR/AMF



# LOG OF 2019-BH-04 / DGW-MW-12

DRILLING METHOD: Direct Push NORTHING: 7,102,370 FT EASTING: 2,479,330 FT

DATE/TIME: 01/21/2019, 1620 DRILLER: West Drilling, Robert Williams

RIG: Geoprobe 7822DT SURFACE ELEVATION: 637.02 FT AMSL TOTAL DEPTH: 23.5 FT BGS

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
	1		3.2 5.0				(0.0-16.5) (CL) SILTY CLAY, some gravels, trace fine sand, roots; dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff.  (3.2) Soil color changes to light gray (N7), dusky yellowish brown (10YR 2/2), and dark yellowish orange (10YR 6/6).
-5 - - -	2		<u>5.0</u> 5.0		CL		<ul> <li>(4.1) Soil color changes to dusky yellowish brown (10YR 2/2).</li> <li>(5.9) Same as above (SAA) except with dark yellowish brown (10YR 4/2).</li> <li>(6.5) SAA except no dark yellowish brown (10YR 4/2).</li> <li>(8.5) SAA except no roots remaining; stiff.</li> </ul>
- 10 - - -	3		<u>4.8</u> 5.0				(10.5) Soil color changes to dark yellowish brown (10YR 4/2) to moderate yellowish brown (10YR 5/4); very stiff.  (12.8) Soil color changes to light gray (N7) with dark yellowish orange (10YR 6/6); stiff.
- 15 - - - - - 20	4		<u>4.6</u> 5.0		MH		(16.5-16.7) (MH) CLAYEY SILT, trace fine sand; light gray (N7) with grayish brown (5Y 8/4); cohesive, w <pl, (10yr="" (16.7-23.0)="" (17.8)="" (5y="" (cl)="" (n7)="" 4)="" 4);="" 6="" 6);="" 8="" and="" brown="" clay,="" cohesive,="" dark="" except="" fine="" gray="" grayish="" hard.<="" light="" no="" orange="" saa="" sand;="" silty="" soft.="" stiff.="" td="" trace="" very="" with="" w~pl,="" yellowish=""></pl,>
- -	5		<u>4.1</u> 3.5				(22.1) Soil color changes to medium gray (N5).  (23.0-23.5) SHALE; medium gray (N5); Hard.
- <b>25</b> - -							END OF BOREHOLE AT 23.5 FEET BELOW GROUND SURFACE.
_ 30 							

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	West of Slag Landfill	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

DATE/TIME: 01/21/2019, 1150
TOTAL DEPTH: 25 FT BGS

RIG: Geoprobe 7822DT

NORTHING: 7,102,416 FT

EASTING: 2,479,280 FT

SURFACE ELEVATION: 636.48 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
-5	1		3.8 5.0				(0.0-13.5) (CL) SILTY CLAY, trace fine grained sands, trace roots and gravel; dusky yellowish brown (10YR 2/2); cohesive, w~PL, firm. (0.2) Pink granite from railroad observed. (1.1) Shells observed, no roots remain. (2.5) Same as above (SAA) except with some dark yellowish brown (10YR 4/2); stiff.
	2		<u>5.0</u> 5.0		CL		(7.5) Soil color changes to only dusky yellowish brown (10YR 2/2); very stiff.
- 10	3		<u>5.0</u> 5.0				(10.5) Soil color changes to dark yellowish brown (10YR 4/2).
- 15							(13.5-21.0) (CL) gravelly SILTY CLAY, rounded gravel, trace fine sand; dark yellowish brown (10YR 4/2); cohesive, w~PL, very stiff.
	4		<u>5.0</u> 5.0		CL		(15.5) Soil color changes to moderate yellowish brown (10YR 5/4); stiff.  (17.0) Soil color changes to pale yellowish brown (10YR 6/2) with dark yellowish orange (10YR 6/6) mottling; firm.
20							(18.5) SAA except with larger gravels; soft, w>PL.
- 20	5		<u>3.3</u> 5.0		CL		(21.0-23.5) (CL) SILTY CLAY, some gravel, trace fine sand; light gray (N7) with dark yellowish orange (10YR 6/6) mottling; cohesive, w~PL, firm. (22.0) w>PL, very soft. (22.5) w~PL, stiff.  \( (23.0) \) Soil color changes to medium gray (N5); hard.
- 25					SHALE		(23.5-25.0) SHALE; medium dark gray (N4); hard. END OF BOREHOLE AT 25.0 FEET BELOW GROUND SURFACE.
-30							
35							

PROJECT NO:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	West of Slag Landfill, Southeast of North Tributary	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

DATE/TIME: 01/21/2019, 1400
TOTAL DEPTH: 25 FT BGS

RIG: Geoprobe 7822DT

NORTHING: 7,102,402 FT

EASTING: 2,479,298 FT

SURFACE ELEVATION: 636.70 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - -	1		3.7 5.0		CL		(0.0-7.5) (CL) gravelly SILTY CLAY, trace fine sand, trace roots; dusky yellowish brown (10YR 2/2) and dark yellowish brown (10YR 4/2); cohesive, w~PL, stiff.
-5 - - - -	2		<u>5.0</u> 5.0		 CL		(4.1) Soil color changes to dark yellowish brown (10YR 4/2) with dusky yellowish brown (10YR 2/2); very stiff.  (7.5-10.0) (CL) SILTY CLAY, some gravel (5%), trace fine sand; light gray (N7) with dark yellowish orange (10YR 6/6) mottling; cohesive, w~PL, very stiff.  (8.0) Soil color changes to dusky yellowish brown (10YR 2/2).
10	3		<u>5.0</u> 5.0		CL		(10.0-17.5) (CL) gravelly SILTY CLAY, rounded gravel, trace fine sand; dark yellowish brown (10YR 4/2); cohesive, w~PL, very stiff.
- - - - - 20	4		<u>5.0</u> 5.0		CL&CG SM		(17.5-18.5) (CL and GC) SILTY CLAY and GRAVEL, rounded gravel; pale yellowish brown (10YR 6/2) with dark yellowish orange (10YR 6/6) mottling; cohesive, w~PL, stiff.  (18.5-19.0) (SM) SILTY SAND; light brown (5YR 5/6); non-cohesive, moist.
-	5		<u>3.7</u> 5.0		CL		(19.0-24.5) (CL) SILTY CLAY, trace fine sand; light gray (N7) and dark yellowish orange (10YR 6/6); cohesive, w~PL, very stiff.  (22.0) Same as above (SAA) except no dark yellowish orange (10YR 6/6).  (23.0) Soil color changes to medium gray (N5); very stiff.
25  					SHALE		(24.0-24.5) (SM) SILTY SAND; light gray (N7); non-cohesive, dry. (24.5-25.0) SHALE; medium dark gray (N4); hard. END OF BOREHOLE AT 25.0 FEET BELOW GROUND SURFACE.
- -30 - -							
- - - 35 - -							

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	West of Slag Landfill	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 23.5 FT BGS

DATE/TIME: 01/21/2019, 1525

RIG: Geoprobe 7822DT

NORTHING: 7,102,380 FT

EASTING: 2,479,313 FT

SURFACE ELEVATION: 636.55 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_	1	(FFIM)	3.8 5.0		CL		(0.0-6.8) (CL) gravelly SILTY CLAY, trace fine sand, trace roots; dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff.  (4.2) larger gravels and tree roots observed.
-5 - - -	2		<u>5.0</u> 5.0		———		(5.1) Soil color changes to dusky yellowish brown (10YR 2/2) with dark yellowish orange (10YR 6/6).  (6.8-23.0) (CL) SILTY CLAY, some gravel (10%); pale yellowish brown (10YR 6/2) with dark yellowish orange (10YR 6/6); cohesive, w~PL, stiff. (8.3) Soil color changes to dusky yellowish brown (10YR 2/2).
- 10 - - -	3		<u>5.0</u> 5.0		Q.		<ul><li>(10.1) Soil color changes to brownish gray (5YR 4/1).</li><li>(12.0) Soil color changes to dark yellowish brown (10YR 4/2) with dark yellowish orange (10YR 6/6) mottling.</li><li>(14.3) Soil color changes to light gray (N7) with dark yellowish orange (10YR</li></ul>
- 15 - - -	4		<u>5.0</u> 5.0		CL		6/6) and grayish brown (5Y 8/4).  (18.8) Soil color changes to light brown (5YR 5/6). (18.9) Soil color changes to light gray (N7) with dark yellowish orange (10YR
- 20 - - -	5		<u>3.5</u> 3.5		-SHALE		(22.5) Soil color changes to medium gray (N5) with intermittent light gray (N7) (SM) SILTY SAND layers (hair thin).
- - 25 - -							(23.0-23.5) SHALE; medium gray (N5); hard. END OF BOREHOLE AT 23.5 FEET BELOW GROUND SURFACE.
- -30 - -							
- -35 - - -							

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	West of Slag Landfill	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

NORTHING: 7,102,090 FT EASTING: 2,480,296 FT

DATE/TIME: 01/22/2019, 1200

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 25 FT BGS RIG: Geoprobe 7822DT SURFACE ELEVATION: 639.97 FT AMSL

DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
			0.0				(0.0-7.3) (CH) CLAY, high plasticity, trace roots; dark yellowish brown (10YR 4/2); cohesive, w~PL, soft. (0.5) Same as above (SAA) except with trace sub-angular gravels.
	1		<u>3.9</u> 5.0		СН		(2.1) SAA except with some fine grained sand (5%); soil color changes to dusky yellowish brown (10YR 2/2).
5				_			(3.9) SAA except stiff.
	2		<u>4.5</u> 5.0				(6.8) Soil color changes to light olive gray (5Y 5/2); very stiff.  (7.3-12.5) (CL) SILTY CLAY, low plasticity, some fine sand, trace roots;
			3.0				dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff.
10					CL		(11.1) SAA except with trace gravel.
	3		<u>5.0</u> 5.0				(11.5) SAA except some fine sand; no roots.  (12.5-15.8) (CL) sandy SILTY CLAY, fine grained sand, trace gravel; dusky yellowish brown (10YR 2/2); cohesive, w>PL, soft-very soft.
15				_	CL		
	4		<u>5.0</u> 5.0		GP&SM		(15.8-16.3) (GP&SM) GRAVEL and SILTY SAND, rounded gravels, fine grained sand; dusky yellowish brown (10YR 2/2); non-cohesive, wet, very loose.
			5.0		CL		(16.3-21.2) (CL) sandy SILTY CLAY, fine grained sand; dusky yellowish brown (10YR 2/2); cohesive, w>PL, soft.
- 20				_			(20.0) Fall in noted at beginning of run.  (21.2-24.5) (CL) SILTY CLAY, trace fine sand; light olive gray (5Y 5/2) with
	5		<u>5.0</u> 5.0		CL		grayish brown (5Y 8/4); cohesive, w-PL, firm. (21.5) SAA except with dark yellowish orange (10YR 6/6); firm. (23.0) SAA except very stiff.
25					SHALE		(24.5-25.0) SHALE; medium gray (N5); hard. END OF BOREHOLE AT 25.0 FEET BELOW GROUND SURFACE.
							END OF BORLHOLE AT 25.01 LET BELOW GROUND SURFACE.
30							
35							

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	South of North Disposal Area	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

DATE/TIME: 01/22/2019, 1315
TOTAL DEPTH: 15 FT BGS

RIG: Geoprobe 7822DT

EASTING: 2,480,374 FT

NORTHING: 7,102,387 FT

SURFACE ELEVATION: 636.45 FT AMSL

		1011 500				CTOZZE	<del></del>
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
_	1		3.9 5.0		CL		(0.0-2.5) (CL) SILTY CLAY, trace gravel, trace fine sand, trace roots; moderate yellowish brown (10YR 5/4); cohesive, w~PL, soft. (0.5) Same as above (SAA) except soil changes color to dark yellowish brown (10YR 4/2); firm-stiff.
_	ı		5.0		CL		(2.5-3.9) (CL) gravelly SILTY CLAY, sub-angular gravels, trace fine sand, trace roots; dark yellowish brown (10YR 4/2) with moderate yellowish brown (10YR 5/4); cohesive, W~PL, firm-stiff.  (3.9-9.5) (CL) SILTY CLAY, some sub-angular gravels, trace fine sand, trace
-5 - - -	2		<u>5.0</u> 5.0		CL		roots; dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff. (4.5) SAA except trace (2%) gravel. (6.0) SAA except some gravel (10%), no roots; very stiff. (7.0) Gravel increasing with depth.
10 	_		5.0	_	GP&SM		(9.5-9.9) (GP&SM) GRAVEL and SILTY SAND; medium gray (N5) and dark yellowish orange (10YR 6/6); non-cohesive, moist, loose.  (9.9-12.5) (CL) SILTY CLAY, trace fine sand; light gray (N7) with dark yellowish orange (10YR 6/6); cohesive, w~PL, very stiff.
_	3		<u>5.0</u> 5.0		SM CL		\(\lambda(12.5-12.6)\) (SM) SILTY SAND; light brown (5YR 5/6); non-cohesive, moist. \(\int\) (12.6-14.5) (CL) SILTY CLAY, trace fine sand; light gray (N7) with dark yellowish orange (10YR 6/6); cohesive, w~PL, very stiff.
<del>-</del> 15					SHALE	<u></u>	(14.5-15.0) SHALE; medium gray (N5) with dark yellowish orange (10YR 6/6); hard.  END OF BOREHOLE 15.0 FEET BELOW GROUND SURFACE.
							END OF BOREHOLE 15.0 FEET BELOW GROUND SURFACE.
_							
-20							
_							
-							
- 25 -							
_							
- 30							
_							
_							
_ 35							
_							
-							

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	North of North Disposal Area	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

NORTHING: 7,102,382 FT EASTING: 2,480,142 FT

DATE/TIME: 01/22/2019, 1420

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 24 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 636.01 FT AMSL **DEPTH** RUN PID **REC** SAMPLE **USCS DESCRIPTION AND COMMENTS** (PPM) (Feet) No. (Feet) (0.0-2.5) (CL) SILTY CLAY, trace fine sand, some roots; dark yellowish brown (10YR 6/2) with dusky yellowish brown (10YR 2/2); cohesive, w~PL, CL 2.5 5.0 (2.0) Soil color changes to only dusky yellowish brown (10YR 2/2). 1 GP (2.5-3.0) (GP) GRAVEL, sub-angular gravel, battery case fragments noted; non-cohesive, moist, loose. (3.0-8.0) (CL) SILTY CLAY, trace fine sand, some roots; dusky yellowish brown (10YR 2/2); cohesive, w~PL, firm. 5 CL (6.5) SAA except with some fine sand (10%), no roots remain. <u>5.0</u> 5.0 2 (8.0-10.2) (CL) sandy SILTY CLAY, fine sand; dusky yellowish brown (10YR 2/2); cohesive, w~PL, firm. CL 10 (10.2-14.0) (CL&SP) SILTY CLAY and SAND, fine grained, trace rounded gravel; light olive gray (5Y 5/2) and dark yellow orange (10YR 6/6); cohesive, w~PL, firm. CL&SP <u>5.0</u> 5.0 3 (12.7) Small pocket of sub-angular gravel, some medium grained sand. (13.0) Small pocket of rounded to sub-rounded gravel; stiff. GW&SW (14.0-14.4) (GW&SW) GRAVEL and SAND, coarse grained sands; light olive gray (5Y 5/2); non-cohesive, wet, loose. 15 (14.4-18.8) (CL) SILTY CLAY; medium dark gray (N4) with dark yellowish orange (10 YR 6/6) mottling; cohesive, w~PL, hard. CL 5.0 5.0 (18.8-20.0) (OH) sandy ORGANIC SILT, fine grained sand; medium dark ОН gray (N4); cohesive, w~PL, firm. 20 (20.0-21.1) (CL) SILTY CLAY, trace very fine sand; medium gray (N5); CL cohesive, w~PL, hard. <u>4.0</u> 4.0 (21.1-24.0) SHALE; medium gray (N5); hard. 5 SHALE END OF BOREHOLE 24.0 FEET BELOW GROUND SURFACE. 25 30 35

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	North of North Disposal Area, western edge	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

211

NORTHING: 7,102,417 FT

DATE/TIME: 01/22/2019, 1510

DRILLER: West Drilling, Robert Williams

EASTING: 2,480,634 FT

TOTAL DEPTH: 15 FT BGS

RIG: Geoprobe 7822DT

SURFACE ELEVATION: 642.40 FT AMSL

				_	<u> </u>		
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
- - -	1		<u>2.0</u> 5.0		GW		(0.0-1.0) (CL) gravelly SILTY CLAY, sub-angular gravel, trace roots (5%); dark yellowish brown (10YR 4/2) with medium gray (N5) and grayish orange (10YR 7/4); non-cohesive, moist, loose.  (1.0-2.8) (GW) GRAVEL, some silty clay (10%), sub-angular to sub-rounded gravel; dusky yellowish brown (10YR 2/2); non-cohesive, moist, loose.  (2.7) Asphalt observed.
- 5					CL&GW		(2.8-5.4) (CL&GW) SILTY CLAY and GRAVEL, sub-angular gravel; dusky yellowish brown (10YR 2/2); non-cohesive, moist, loose.  (4.8) Battery case fragment observed.
-	2		<u>1.9</u> 5.0		SM		(5.4-10.0) (SM) SILTY SAND, very coarse grained; pale yellowish brown (10YR 6/2) with dark yellowish orange (10YR 6/6); cohesive, w~PL, soft. (5.8) w>PL.
10 					GP&SP	000	(10.0-11.0) (GP&SP) silty GRAVEL and SAND, poorly graded sand; light olive gray (5Y 5/2); non-cohesive, wet, loose.
-	3		<u>4.5</u> 5.0		GP&OH CL	000	(11.0-12.2) (GP&OH) GRAVEL and SILT, some fine sand; yellowish gray (5Y 7/2) and grayish brown (5Y 8/4); cohesive, w>PL, firm.  (12.2-14.5) (CL) SILTY CLAY; yellowish gray (5Y 7/2) and dark yellowish orange (10YR 6/6); cohesive, w~PL, hard.
– 15					SHALE		(14.5-15.0) SHALE; medium dark gray (N4); hard. END OF BOREHOLE 15.0 FEET BELOW GROUND SURFACE.
- - - - - 20 - -							
- 25   							
- 30 - - -							
- - 35 - - - -							

PROJECT NO:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	North of North Disposal Area, eastern edge	REVIEWED BY:	THR



DRILLING METHOD: Direct Push

NORTHING: 7,101,842 FT

DATE/TIME: 01/22/2019, 1610

DRILLER: West Drilling, Robert Williams

EASTING: 2,480,769 FT
SURFACE ELEVATION: 642.34 FT AMSL

TOTAL DEPTH: 20 FT BGS

RIG: Geoprobe 7822DT

**DEPTH** RUN PID **REC** SAMPLE **USCS DESCRIPTION AND COMMENTS** (PPM) (Feet) No. (Feet) (0.0-0.1) TOPSOIL. SP (0.1-0.9) (SP) SAND, very fine grained, uniformly graded; dark yellowish orange (10YR 6/6) to moderate brown (5YR 4/4); non-cohesive, moist, very 3.3 5.0 CL 1 (0.9-4.0) (CL) SILTY CLAY, trace fine sand; dark yellowish brown (10YR 4/2) and dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff. (2.5) Same as above (SAA) except with trace gravel. (3.7) SAA except no gravel; soil changes color to dark yellowish brown (10YR 4/2). (4.0-12.1) (OH&SP) clayey ORGANIC SILT and SAND, very fine grained sand; moderate yellowish brown (10YR 5/4); cohesive, w~PL, soft. <u>5.0</u> 5.0 2 OH&SP (8.0) SAA except with some gravel, gravel increasing with depth; soil changes color to dark yellowish brown (10YR 4/2). 10 (10.0) Calcite observed at end of 10 foot run. (10.2) SAA except soil changes color to yellowish gray (5Y 7/2) with dark yellowish orange (10YR 6/6) with some grayish brown (5Y 8/4); very stiff. (11.5) Soil changes color to dark yellowish brown (10YR 4/2). <u>5.0</u> 5.0 3 (12.1-15.1) (CL) SILTY CLAY, some rounded gravels, trace fine sand; dusky yellowish brown (10YR 2/2); cohesive, w~PL, stiff. CL (13.7) Soil color moderate reddish brown (10R4/6) on seams. 15 (15.1-17.5) (SM) SILTY SAND, fine grained; light olive gray (5Y 5/2) with moderate yellowish brown (10YR 5/4); non-cohesive, dry, compact. SM 2.1 5.0 (17.5-20.0) SHALE; medium dark gray (N4); hard. SHALE 20 END OF BOREHOLE 20.0 FEET BELOW GROUND SURFACE. 25 30 35

PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	Near Admin building	REVIEWED BY:	THR



DATE/TIME: 01/22/2019, 1650

# LOG OF 2019-BH-10

DRILLING METHOD: Direct Push

DRILLER: West Drilling, Robert Williams

TOTAL DEPTH: 18.5 FT BGS RIG: Geoprobe 7822DT

NORTHING: 7,101,688 FT

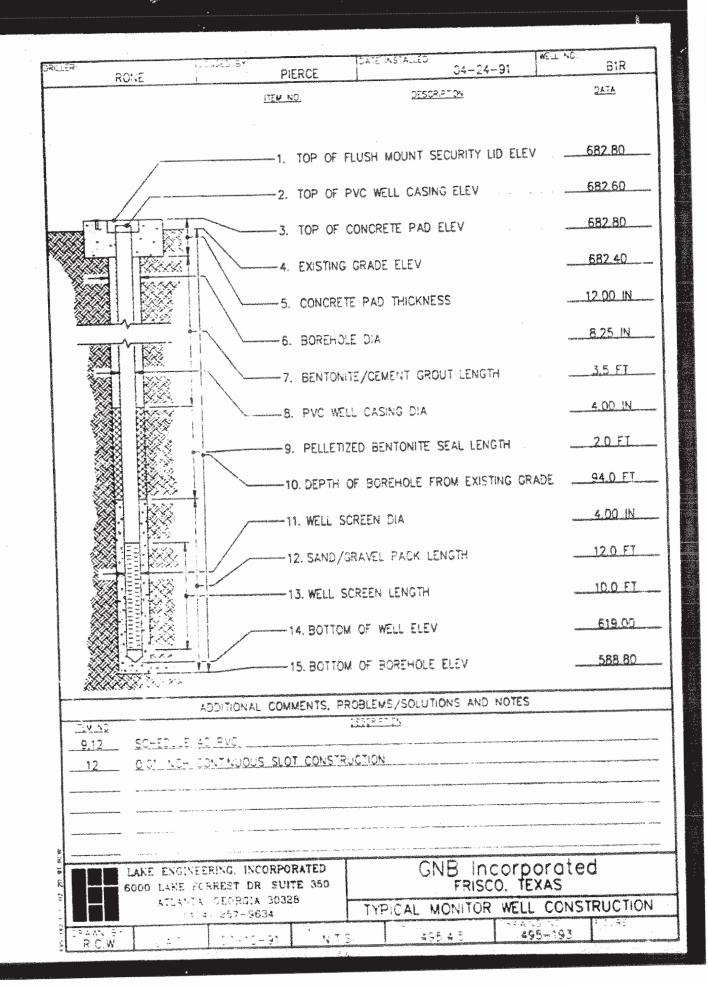
EASTING: 2,480,718 FT

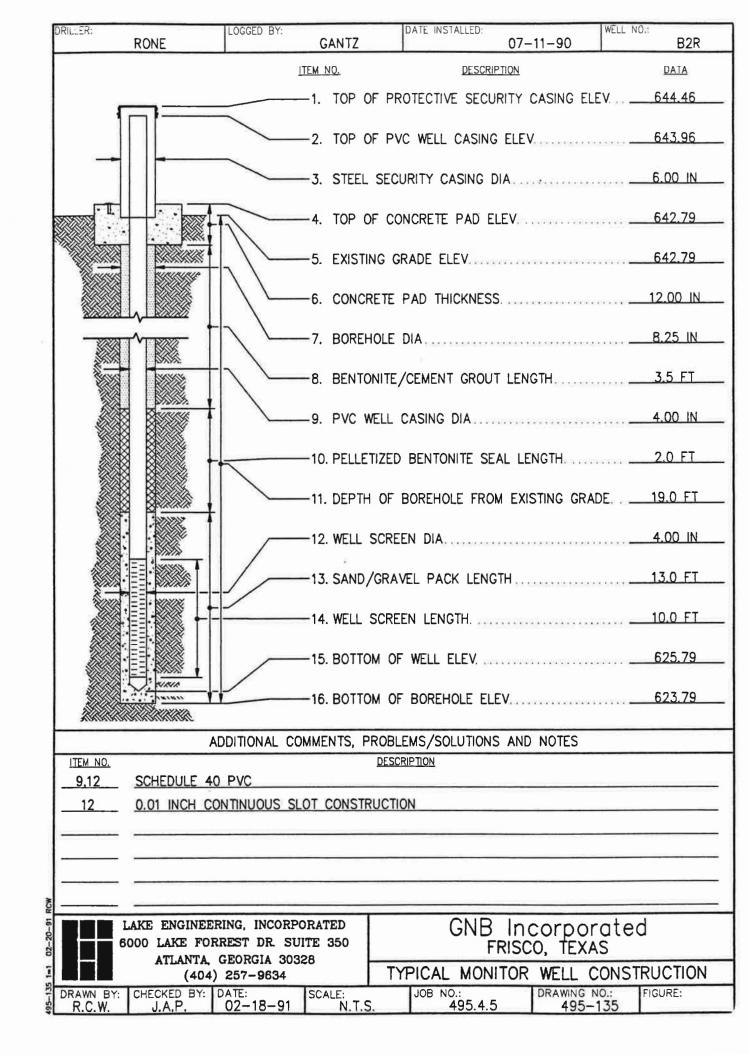
SURFACE ELEVATION: 635.28 FT AMSL

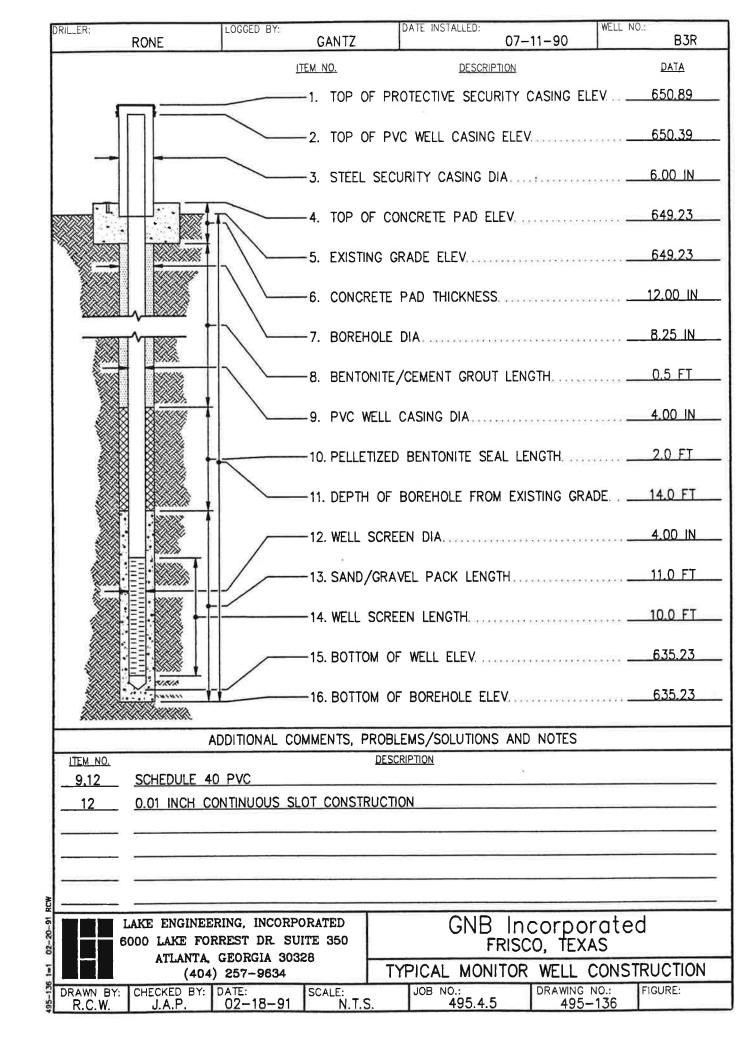
DEPTH (Feet)	RUN No.	PID (PPM)	REC (Feet)	SAMPLE	USCS	GRAPHIC LOG	DESCRIPTION AND COMMENTS
,	1		4.3		CL		(0.0-0.1) TOPSOIL, grass, roots.  (0.1-2.5) (CL) SILTY CLAY, trace gravels; dark yellowish brown (10YR 4/2); cohesive, w~PL, stiff.  (2.1) Gravel increases with depth.
	1		<u>4.3</u> 5.0		CL&GP		(2.5-4.0) (CL&GP) SILTY CLAY and GRAVEL, sub-rounded to sub-angular gravel; dark yellowish brown (10YR 4/2); cohesive, w~PL, stiff.
5	2		3.3 5.0		CL CL&SP		(4.0-4.9) (CL) gravelly SILTY CLAY, sub-rounded to sub-angular; dark yellowish brown (10YR 4/2); cohesive, w~PL, stiff.  (4.9-10.2) (CL&GP) SILTY CLAY and GRAVEL, sub-rounded to sub-angular gravel, some fine to medium grained sand; grayish yellow (5Y 5/2); cohesive, w~PL, firm.
10							(8.3) w>PL. (9.0) Soil color changes to medium gray (N5).
	3		<u>3.4</u> 5.0		CL&GP		(10.2-14.1) (CL&GP) sandy SILTY CLAY and GRAVEL, sub-rounded to sub-angular gravel, fine grained sand (35%); medium gray (N5); cohesive, w~PL, firm. (12.0) sand decreases gradually with depth.
15	4	-	3.5 3.5	-	CL		(14.1-17.9) (CL) SILTY CLAY; medium dark gray (N4) with dark yellowish orange (10YR 6/6); cohesive, w~PL, very stiff.  (16.5) Same as above except without dark yellowish orange (10YR 6/6).
					SHALE		(17.9-18.5) SHALE; medium dark gray (N4); hard. END OF BOREHOLE 18.5 FEET BELOW GROUND SURFACE.
20							
25							
30							
35							

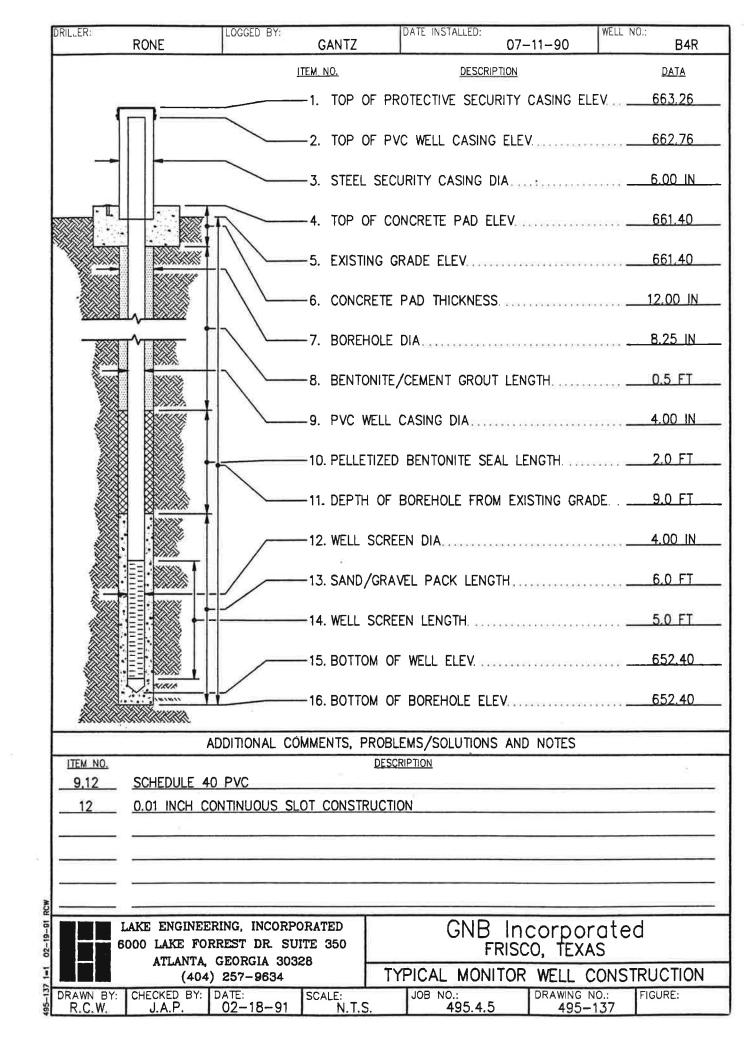
PROJECT No:	130-2086-06	COMPILED BY:	AGA
PROJECT:	Exide Frisco	CHECKED BY:	EPW
LOCATION:	South West of Admin building	REVIEWED BY:	THR

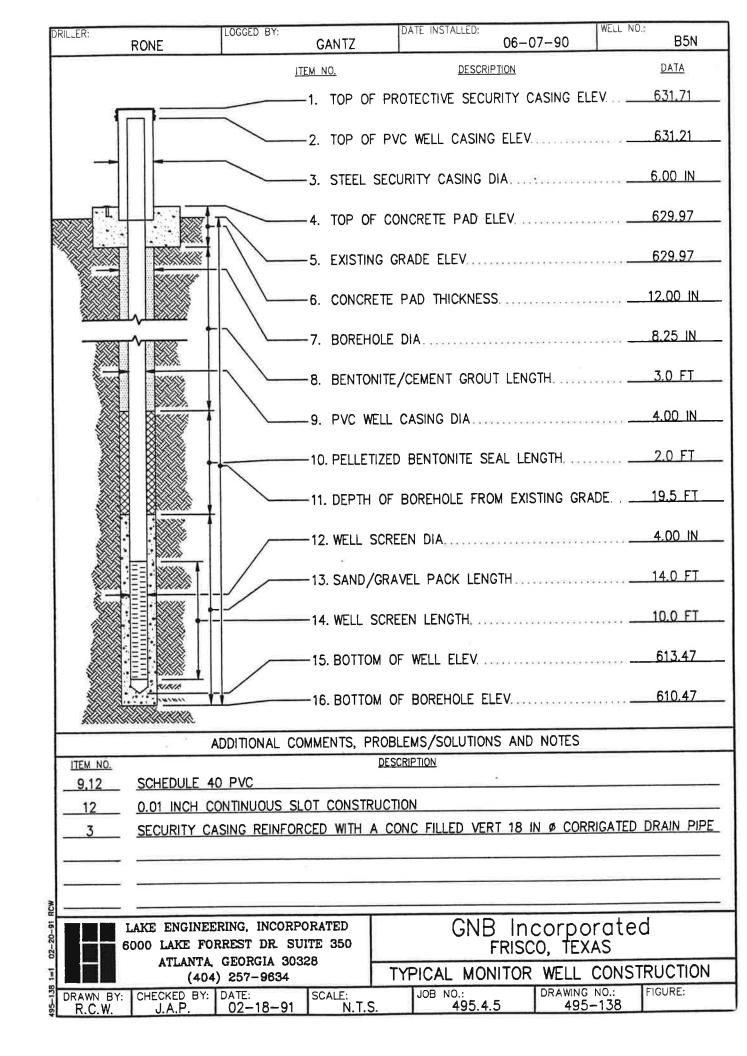
ATTACHMENT C
MONITORING WELL CONSTRUCTION DIAGRAMS

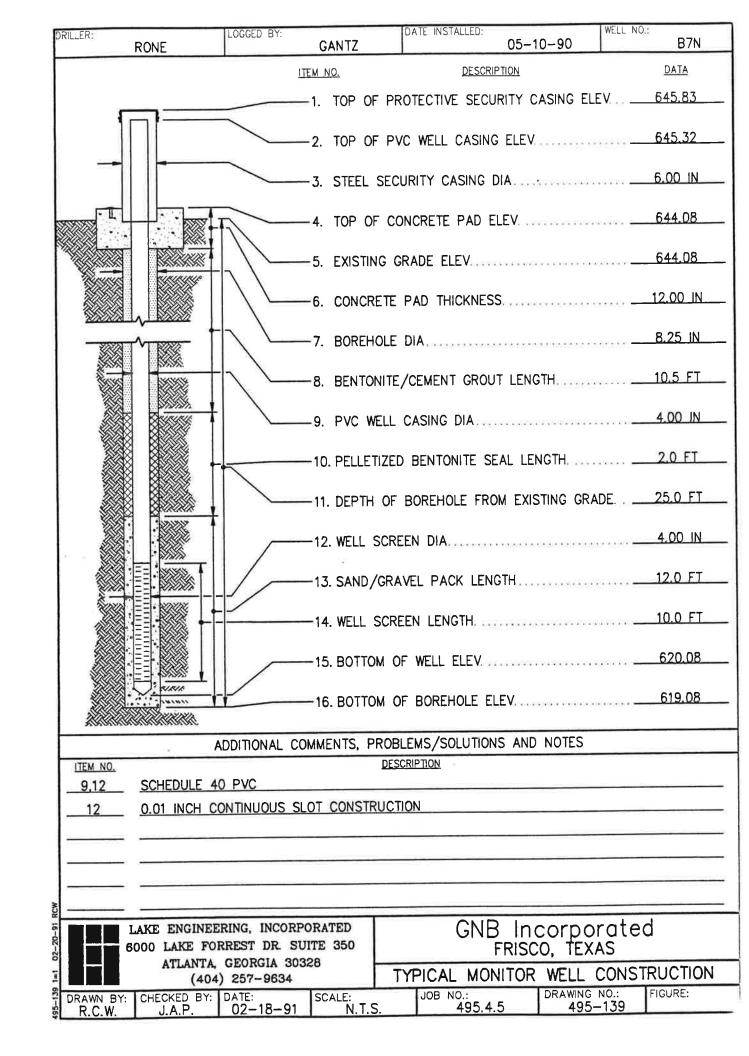


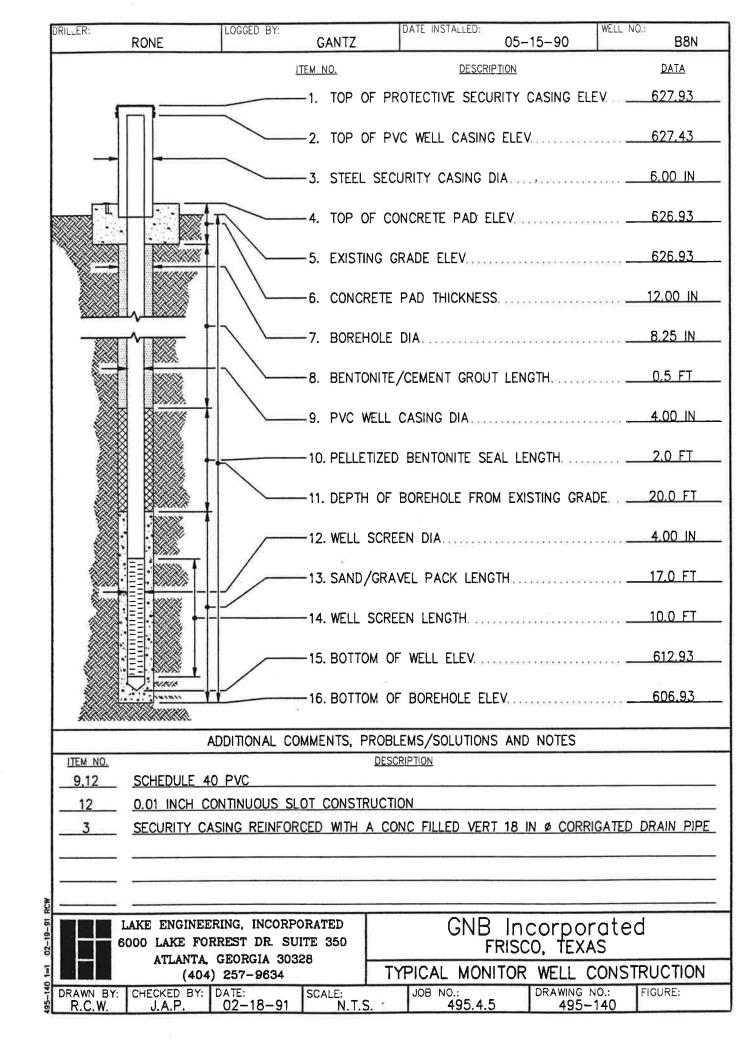


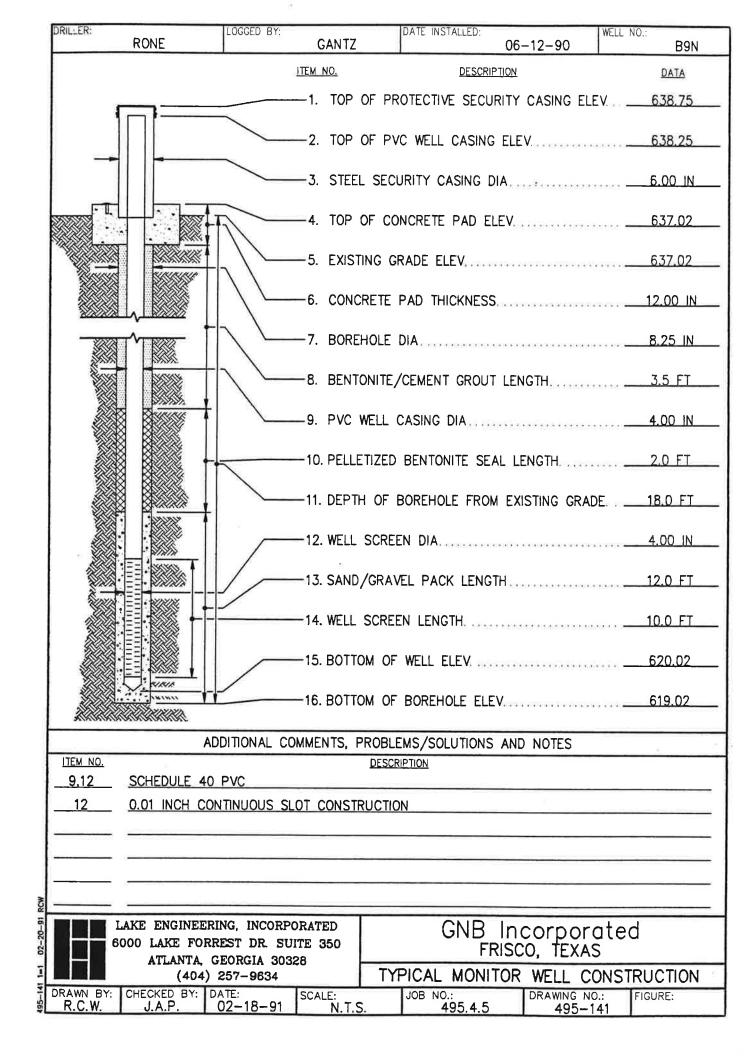












### LOG OF TEST BORING JONES & NEUSE B1/LMW-1 BORING NO. End Date: Page 1 Start Date: 2-3-95 **GNB TECHNOLOGIES** 2-3-95 Drilling Method: Project Number: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Geologist: Driller: Drill Rig Type: 6 inches CME-750 BLAKE GILLESPIE E.D.S.I./R. BROTHERS TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: Total Depth: Surface Elevation (ft.): 635.90 N: 1130.5500 638.74 E: 3406.1100 20.00 635.90 **Datum Elevation:** Water Level Depth (ft.): Time: Datum Description: 0832 7/26/95 Site Datum - Elevations ref. from MSL Recovery (Inches) LOCKING COMPRESSION CAP Sample Type Stratigraphy WELL Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD Cement/Bentonite Grout CLAY (CH) - dark brown, organic material, moist, soft. 60 Bentonite Seal 2" ID Schedule 40 PVC Riser 5.0 CLAY (CH) - light brown to gray clay, firm. 60 ₹ tan, plastic, moist with 10% angular chalk clasts. 20-40 Sieve Sand Filter Pack CLAYEY GRAVEL (GC) - tan clay, moist. 60 CLAY (CH) - tan to gray, chalk clasts, saturated. 2" ID 0.010" mill sk PVC screen 60 SHALE - gray, massive, hard. (Eagle Ford Shale)

BORING TERMINATED AT 20 FEET

-20

-23

#F-204B Austin (8-95)

119.5 120.0 Threaded PVC Cap

REV 8/95

### JONES & NEUSE LOG OF TEST BORING BORING NO. B2/LMW-2 End Date: Client: Start Date: Page 1 **GNB TECHNOLOGIES** 2-3-95 2-3-95 Site: Drilling Method: Project Number: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: **BLAKE GELLISPIE** RMT-JN/R.BROTHERS CME-750 6 inches Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.); Site Coordinates: 30.00 638.72 N: 6183.6400 E: 3546.9700 Water Level Depth (ft.): Datum Description: Datum Elevation: 6.18 7/26/95 1045 Site Datum - Elevations ref. from MSL NA Recovery (Inches) Semple Type Stratigraphy OVM (ppm) Depth (feet) LITHOLOGIC DESCRIPTION CLAY (CH) - dark brown, organic material, moist, firm. Cement/Bentonite Grout 2.0 Bentonite Seal 2" ID Schedule 40 PVC Riser light brown and gray. 60 Ī plastic CLAY (CH) - light brown and gray, chalk pebble layers, saturated. 20-40 Sieve Sand Filter Pack 60 CLAYEY GRAVEL (GC) -saturated, 20% angular gravel sized 2" ID 0.010" mill slot PVC screen CLAY (CH) - tan with chalk clasts, grades down to harder gray clay. 60 SAND (SP) - red, medium grained, saturated. SHALE - gray, massive, hard. (Eagle Ford Shale) -20 12 20.5 Thresded PVC Cap -21 BORING TERMINATED AT 21 FEET -22 -23 -24

통-204B Austin (8-95)

**REV 8/95** 

# JONES & NEUSE LOG OF TEST BORING **B3/LMW-3** BORING NO. Start Date: End Date: Page 1 of 1 Client: 2-3-95 2-3-95 **GNB TECHNOLOGIES** Drilling Method: Project Number: Site: 50-01584.13 HOLLOW STEM AUGERS FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: 6 Inches RMT-JN/R.BROTHERS CME-750 **BLAKE GILLESPIE** PAD Elevation (ft.): Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): Site Coordinates: 637.76 639,78 637.76 E: 3928.4200 N: 5364.7800 Datum Elevation: Water Level Depth (ft.): Time: Datum Description: 0828 7/26/95 NA Site Datum - Elevations ref. from MSL Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION CONCRETE PAD 60 CLAY (CH) -dark brown, organic, moist, soft. Cement/Bentonite Grout Bentonite Seal 2" ID Schedule 40 PVC Riser CLAY (CH) - tan, plastic, hard, with 10% chalk pebbles in a clay matrix. 60 6.0 Ī 20-40 Sieve Sand Filter Pack gravelly clay, tan, plastic, moist. CLAYEY GRAVEL (GC) - saturated, suspended gravel in a tan clay matrix. 60 2" ID 0.010" mill slo PVC screen CLAY (CH) - gray, iron stained. SHALE - gray, massive, hard. (Eagle Ford Shale) 15.5Threaded PVC Cap 12 -16 **BORING TERMINATED AT 16 FEET** -19 F-204B Austin (8-95) **REV 8/95**

# JONES & NEUSE LOG OF TEST BORING BORING NO. **B4/LMW-4** End Date: Page 1 Client: Start Date: **GNB TECHNOLOGIES** 2-3-95 2-3-95 Drilling Method: Project Number: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Driller: Drill Rig Type: Geologist: **BLAKE GILLESPIE** RMT-JN/R.BROTHERS CME-750 6 Inches Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: E: 3757.2000 641.42 638.15 N: 5735.6900 Datum Elevation: Water Level Depth (ft.): Datum Description: NA 6.76 7/26/95 1030hre. Site Datum - Elevations ref. from MSL Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, organic material, moist, soft. Cement/Bentonite Grout light brown to gray, grades into a laminated brown clay. 60 2" ID Schedule 40 PVC Riser <u>T</u> Bentonite Seel CLAY (CH) - tan, moderate plasticity, moist, angular chalk 60 12.0 chalk clasts, saturated. 20-40 Sieve Sand Filter Pack tan, plastic, moist. 60 2" ID 0.010" mill slot PVC screen -20 24 SAND (SP) - 1.5 feet thick, red, soft, moist. 21.5 22.0 readed PVC Cap SHALE - gray, massive, hard. (Eagle Ford Shale) -23 **BORING TERMINATED AT 22 FEET** F-204B Austin (8-95) REV 8/95

### LOG OF TEST BORING JONES & NEUSE **B5/LMW-5** BORING NO. Client: Start Date: End Date: Page 1 **GNB TECHNOLOGIES** 2-3-95 2-3-95 Site: **Drilling Method:** Project Number: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Borehole Diameter: Drill Rig Type: Geologist: Driller: **BLAKE GILLESPIE** RMT-JN/R. BROTHERS CME-750 6 Inches Surface Elevation (ft.): TOC Elevation (ft.): Site Coordinates: Total Depth: PAD Elevation (ft.): 643.27 646.61 N: 5706.3200 E: 4174.7100 22.00 643.27 Datum Description: **Datum Elevation:** Water Level Depth (ft.): Date: Time: 7/25/95 Site Datum - Elevations ref. from MSL 10.25 NA 0647hrs. Recovery (Inches) Sample Type WELL Depth (feet) Stratigraphy OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, moist, soft, organic material near surface. Cement/Bentonite Grout Bentonite Seal CLAY (CH) - dark ten to brown, hard, 10% chalk clasts. 48 2" ID Schedule 40 PVC Riser 6 7.0 GRAVELLY CLAY (CL) - tan, moist. 24 20-40 Sieve Sand Filter Pack CLAY (CH) - tan, hard. 48 24 CLAYEY GRAVEL (GC) - tan. 2" ID 0.01" machine slot PVC screen 24 24 CLAY (CH) - tan, massive soft. 20 SHALE - gray, hard, iron stained fractures. (Eagle Ford Shale, weathered) 24 21 21.5 22.0Threaded PVC Cap -22 SHALE - gray, massive, hard. (Eagle Ford Shale) -23 **BORING TERMINATED AT 22 FEET** 24 F-204B Austin (8-95) **REV 8/95**

# JONES & NEUSE LOG OF TEST BORING B7/LMW-7 BORING NO. Start Date: End Date: Client: 2-3-95 2-2-95 **GNB TECHNOLOGIES** Project Number: Drilling Method: Site: HOLLOW STEM AUGER 50-01584.13 FRISCO, TEXAS Drill Rig Type: Borehole Diameter: Driller: Geologist: CME-750 6 Inches RMT-JN/R. BROTHERS **BLAKE GILLESPIE** TOC Elevation (ft.): PAD Elevation (ft.); Total Depth: Surface Elevation (ft.): Site Coordinates: 659.07 657.45 N: 6574.6800 E: 4322.6900 20.00 Datum Elevation: Water Level Depth (ft.): Datum Description: 7/26/95 1050hrs. Site Datum - Elevations ref. from MSL NA 8.06 Recovery (Inches) Sample Type Dripth (feet) Stratigraphy OVM (ppm) Saturation LITHOLOGIC DESCRIPTION CONCRETE PAD CLAY (CH) - dark brown, soft, moist, organic material near surface. 60 Cement/Bentonite Bentonite Seal 2" ID Schedule 40 PVC Riser light brown to gray, grades to laminated brown clay. 60 20-40 Sieve Sand Filter Pack Y tan, moist with 10% angular chalk clasts. CLAYEY GRAVEL (GC) - tan, decreasing grain size with depth, saturated. 48 2" ID 0.01 inch machine slot PVC Screen CLAY (CH) - tan to gray, <5% chalk pebbles. 36 36 weathered shale, fissile with horizontal jointing, iron 19 -20 SHALE - gray, massive, hard. (Eagle Ford Shale) BORING TERMINATED AT 20 FEET 21 22 1584E 8/23/95 23

REV 8/95

F-2048 Austin (8-95)

### LOG OF TEST BORING JONES & NEUSE BORING NO. **B8/LMW-8** Client: Start Date: End Date: Page 1 of **GNB TECHNOLOGIES** 2-4-95 2-4-95 Drilling Method: Site: Project Number: **HOLLOW STEM AUGER** FRISCO, TEXAS 50-01584.13 Borehole Diameter: Geologist: Driller: Drill Rig Type: **BLAKE GILLESPIE** RMT-JN/R. BROTHERS CME-750 6 Inches Site Coordinates: Total Depth: Surface Elevation (ft.): TOC Elevation (ft.): PAD Elevation (ft.): N: 5539.0400 E: 4812.0100 22.00 645.57 648.68 645.57 Datum Description: **Datum Elevation:** Water Level Depth (ft.): Date: Time: Site Datum - Elevations ref. from MSL NA 11.13 7/26/95 0630hrs. Recovery (Inches) Sample Type Stratigraphy WELL Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD (Surface Seat) CLAY (CH) - dark brown, organic material, moist, firm. Cement/Bentonite 2 24 3 Bentonite Seal 24 2" ID Schedule 40 PVC Riser 6 60 7 SANDY CLAY (CL) - tan, firm, 10-20% course sand and pebbles size chalk clasts. 8 20-40 Sieve Sand Filter Pack 12 48 CLAYEY GRAVEL (GC) - saturated. 13 CLAY (CH) - brown, massive, very hard. 2" ID 0.01 inch machine slot PVC 24 no recovery 24 19 SAND (SP) - gray and red, medium grained, moist. 20 24 SHALE - gray, hard, massive. (Eagle Ford Shale) -21 22.0 Threaded PVC Cap 22 **BORING TERMINATED AT 22 FEET** 24

**REV 8/95** 

F-204B Austin (8-95)

# JONES & NEUSE

# LOG OF TEST BORING

BORING NO.

B9/LMW-9

lient:		NB TE	CHNO	LOGIES				Start Date: 2-4-95	End Date: 2-4-95	Page 1 of 1
ite:	F	RISCO,	TEXA	\S				Drilling Method:	Project Number: 50-01584.13	
goloe	ist:	BLAKE	GILLE	SPIE	Drille RMT		BROTHERS	Drill Rig Type:	Borehole Diameter	
ite Co		ates: 3.8400		E: 4	1833.360		Total Depth: 24.00	Surface Elevation (ft.): 660.48	TOC Elevation (ft.): 663:72	PAD Elevation (ft. 660.48
		ription: um - Ele		s ref. fr	om MSL	1	Datum Elevation: NA	Water Level Depth (ft.): 18.74ft.	Date: 4/24/95	Time:
Sample Type	Recovery (Inches)	Saturation	OVM (ppm)	Depth (feet)	Stratigraphy		LITHOLO	GIC DESCRIPTION	CONCRETE PAD (Surface Seat)	
U)	-			-		CLAY (	CH) - dark brown, ce, moist, moderat	soft, friable, organic mater ely soft.	ial near	8
	12 12 12 24 12 24  gray, massive, hard yellow staining.									Cement/Bentonite Grout
9.				5 6 7		gray, n yellov	nassive, hard, gradi w staining.	ing into jointed clay with re	ed and	- Bentonite Seal
	24			8 9					9.	
	24			11 11 12						- 20-40 Sieve San Filter Pack
X	24			13 14 15		tan to l	prown, jointed.			- 2" ID 0.01 inch
	24			16 17		gray, m	nessive, jointed, dr	/•		<ul> <li>2" ID 0.01 inch machine slot PVC Screen</li> </ul>
X	24			18 19 20						
	24			21 22 		SHALF	- grav massive h	ard. waxy texture weathe	red	
				23		(Eagle	Ford Shale)	ard. waxy texture, weathe	23	5Threaded PVC Ca
		- 1		_				TERMINATED AT 24 FEET		



# ABOVE GROUND MONITORING WELL CONSTRUCTION LOG <u>LMW-9R</u>

Mosociales					
PROJECT NAME: Exide Groundwater	Monitoring	PROJECT NUMBER:	130-2086-01		
SITE NAME: CL2LF		LOCATION: Frisco,	Гехаs		
CLIENT: Exide		SURFACE ELEVATIO	N: 661.39 ft MSL		
GEOLOGIST: A. Marlow NC	ORTHING: 710325	4.02	EASTING: 2480865.36		
DRILLER: Steven Wimple ST	ATIC WATER LEVE	VEL: COMPLETION DATE: 3/1/2016			
DRILLING COMPANY: West Drilling		DRILLING METHODS	: Hollow Stem Auger		
STICK UP: 3.29	PEA WEE GRO DIAM DIAM CON	OF CASING ELEVATION:	664.31  no):  661.39  : 2 7  gs): 3		
	TYPE		OTH (ft. bgs): 3 ONITE SEAL: 3x 50# Bag . bgs): 12		
E OF TERM			PE:		
79 × 1		OF SCREEN DEPTH (ft. bg			
* ANNE M FAETH-BOYD					
	TYPE	OF SCREEN: Schedu	40		
GEOLOGY 12300 12300 F	SCRI	EEN SLOT SIZE (in.): 0.0	Cond		
Teth Boy E	SIZE	OF SAND PACK: 16/30	Page		
ONAL & GEO		UNT OF SAND: 8x 50#			
TOTAL DEPTH	вот	ГОМ OF WELL DEPTH (ft. b	gs): 30		
OF POPEHOLE	ВОТ	TOM OF FILTER PACK (ft. b	ogs): 30		
(ft. bgs): 30	TYPE	E AND AMOUNT OF BACKE	TILL: None		
ADDITIONAL NOTES:					

CHECKED BY: P. Joplin, A. Faeth-Boyd DATE CHECKED: 7/18/2016

PREPARED BY: A. Marlow

# JONES & NEUSE LOG OF TEST BORING BORING NO. LMW-10 Client: Stert Date: End Date: Page **GNB TECHNOLOGIES** 2-4-95 2-4-95 Drilling Method: Site; Project Number: FRISCO, TEXAS HOLLOW STEM AUGER 50-01584.13 Driller: Drill Rig Type: Borehole Diameter: Geologist: BLAKE GILLESPIE RMT-JN/ R.BROTHERS CME-750 6 Inches Total Depth: Surface Elevation (ft.); TOC Elevation (ft.): PAD Elevation (ft.): Site Coordinates: 683.05 N: 6390.7500 681.03 881.03 E: 4954.0700 18.00 Datum Description: Datum Elevation: Water Level Depth (ft.): 7/26/95 Site Datum - Elevations ref. from MSL NΑ 11.26 1053hrs. Recovery (Inches) Sample Type Stratigraphy Depth (feet) OVM (ppm) LITHOLOGIC DESCRIPTION Saturation CONCRETE PAD CLAY (CH) - dark brown, soft, friable, organic material near 12 Cement/Bentonite Grout 24 Bentonite Seal tan, firm, massive clay, moist. 24 fractures 1-3" width, moist, yellow and red staining in fractures 2" ID Schedule 40 PVC Riser 36 8.0 gray, two 2" fractures observed filled with sand, iron stained. 20-40 Sieve Sand Filter Pack 24 36 2" ID 0.01 inch machine slot PVC Screen 24 SHALE - massive, very herd. (Eagle Ford Shale) 17.5 18.0 Threaded PVC Cap **BORING TERMINATED AT 18 FEET** 19 **REV 8/95** F-204B Austin (8-95)

# RMT JONES & NEUSE

# LOG OF TEST BORING

Client:	GNB	TECHNO	LOGIES				Start Date: 7-21-95	 5 <sup>.</sup>	Page 1 of 1	
Site:		CO, TEX					Drilling Method: HOLLOW STEM AUGER			Project Number: 50-01584.13
Geologis	nt:	VID McC		- 1	Driller: E.D.S.I./M	IIKE McNITT	Drill Rig Type:	750		Borehole Diameter:
	ordinates	:			.0130	Total Depth:	Surface Elevation (ft.): TOC Elevation (ft.): 646.34 648.84			PAD Elevation (ft.): 646.34
Datum C	Descripti	on:	ns ref. fro			Datum Elevation: NA	Water Level Depth (ft.): 13.52	Date: 7/26/9	5	Time: 0643hrs.
	Recovery (Inches)	OVM (ppm)	Depth (feet)	Stratigraphy		LITHOLOG	GIC DESCRIPTION	WELL CASING CONCRETE PAD (Guriace Seat)	EEL CTIVE	2
4	24		1 2		sub	(CH) - trace sand, f eangular, sand is chal wn; moist.	ine grained, poorly graded, k matrix; plastic; hard; ven	y dark		Cement/Bentonite Grout
	24		4			6				4" ID Schedule 40 PVC Riser
	36		7 8			ă.		8	8.0	Bentonite Seal
	50	·	9 —10 —11 —12 —13		incre	ase sand content, fin	e to coarse grained; wet.		-10.	O Filter Pack
	36		14 15 16		CLAY	YEY GRAVEL with se	to coarse grained, subang city; loose; tan; wet. 	:::::::::::::::::::::::::::::::		4" ID, 0.01 inch s PVC screen
	24		—17 —18 —19		CLAY	orly graded; loose; ta ( (CH) - silty; hard; p ttling; moist.	lastic; gray with rust and y	ellow	-20.	0
	24		20 21 22 22 23		sand	seam, very fine grain E - gray; dense; hard	d. (Eagle Ford Shale)		23.	Sump
			24			BORING	TERMINATED AT 23 FEET		25.	<del>1</del>

# Log of Boring: LMW-21 **Exide Technologies** Completion Date: 2/27/2013 Drilling Method: HSA Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 **Drilling Company:** Frisco, TX Chris Combs Driller: Total Depth (ft): 25 56033 7103205.9759 Driller's License: Northing: Tim Jennings, P.G. 2480099.7956 Logged By: Easting: PBW Project No. 1755 645.12 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 648.28 Depth Well Recovery Lithologic **USCS** Sample (ft) Materials (ft/ft) Description (0 - 1.1) Sandy, gravelly CLAY; wet, very soft, slow dilatancy, high plasticity clay, 0-0.5 ~20-30% fine sand and fine gravel. 0.5-2 (1.1 - 7.9) Silty CLAY, dark gray, moist, firm to hard, no dilatancy, medium to high plasticity, trace carbonate gravel below 5'. 5.0/5.0 2-4 ен, 4-5 5.0/5.0 (7.9 - 10.6) Clayey, gravelly SAND; light brown, fine to coarse sand, moist, soft to firm, medium plasticity clay, ~10-20% clay and ~10-20% fine to medium gravel. SW 10 (10.6 - 13.5) Clayey SILT, light brown, moist, soft to firm, slow dilatancy, medium plasticity. Ćί 5.0/5.0 (13.5 - 16.0) Gravelly, clayey SAND; light brown, fine to coarse sand, moist to wet, wet at 15.8-16', firm to soft, ~40-50% fine to medium gravel, ~5-10% clay above 15'. SW 15 (16.0 - 17.2) Sandy SILT, light brown, wet, soft, medium plasticity. .MĽ (17.2 - 21.8) Sandy, gravelly CLAY; wet to dry, firm to hard, medium plasticity clay, 2.5/5.0 fine to medium gravel (~5-10%) and fine to coarse sand (~10-20%) in clay matrix. Cí. 20 (21.8 - 25.0) SHALE, brownish gray, dry, very hard. 2.2/5.0 SH 25 This log should not to be used separately from the report to which it is attached. Annular Materials Well Materials Pastor, Behling & Wheeler, LLC (0.0 - 2.0) Concrete (2.0 - 8.0) Bentonite Hole Plug (+3.16 - 10.0) Casing, 2" Sch 40 FJT PVC (10.0 - 25.0) Screen, 2" Sch 40 FJT PVC, 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 (8.0 - 25.0) 20/40 Silica Sand

Tel (512) 671-3434 Fax (512) 671-3446

					Completion Date:	2/27/2013	Drilling Method:	HSA		
	Frisco Recy		nter		Drilling Company:	Strata Core Services, LLC	Borehole Diameter (in.)			
	Frisc	o, TX		-	Driller:	Dan Spaust	Total Depth (ft):	20		
					Driller's License:	3038M	Northing:	7102891.282		
					Logged By:	Roberta Russell	Easting:	2480355.465		
	PBW Proje	ct No. 1/	55		Field Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	643.32		
					Sampling Method:					
epth (ft)	Well Materials	Well Recovery LIGGS Sample			ole	Lithol Descri				
0			/////	0-0.5	(0 - 12.5) CLA	Y/Silty CLAY, dark reddish br	own, yellowish brown fror	n 9-12.5', mois		
-				0.5-2	soft to firm, lov	v to medium plasticity, ~10%				
=	22 22	4.5/5.0		2-4						
5 —				4-5						
- -		4.4/5.0								
- 10 — -			ĆL							
- - 15 —		4.0/5.0			gravel in clay r	CLAY with gravel; yellowish bromatrix. candy CLAY, yellowish brown,	•	-		
15 — - -		4.3/5.0			,	Gravelly CLAY, yellowish brow Filty CLAY, grayish brown with	,			

# **PBW**

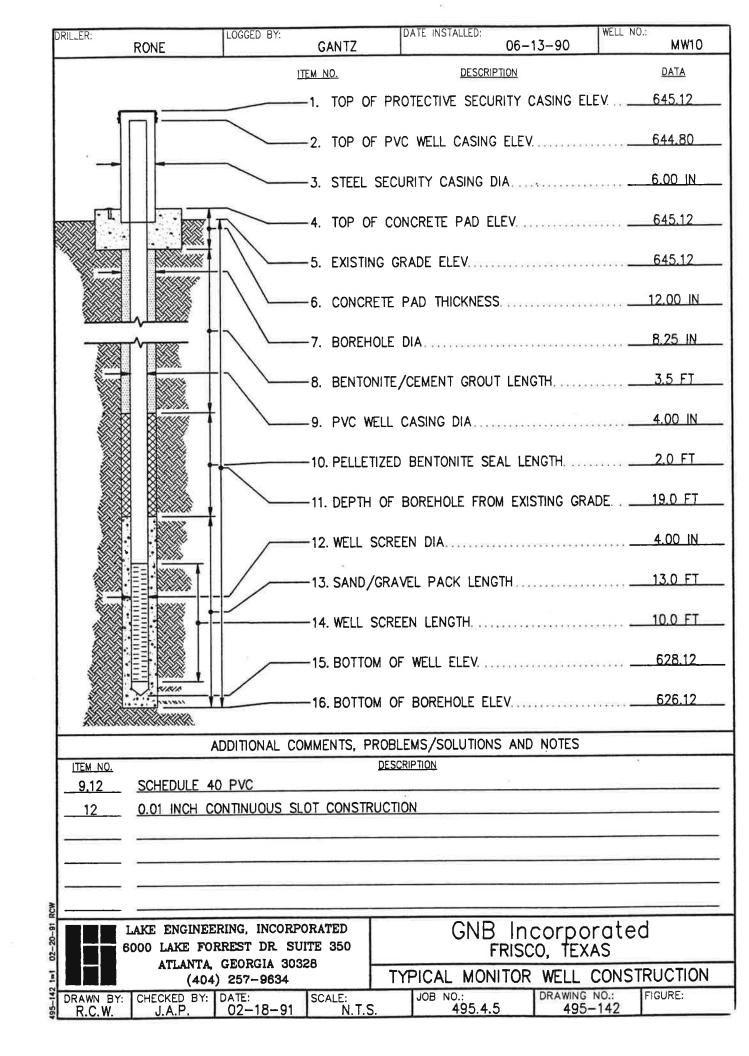
Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

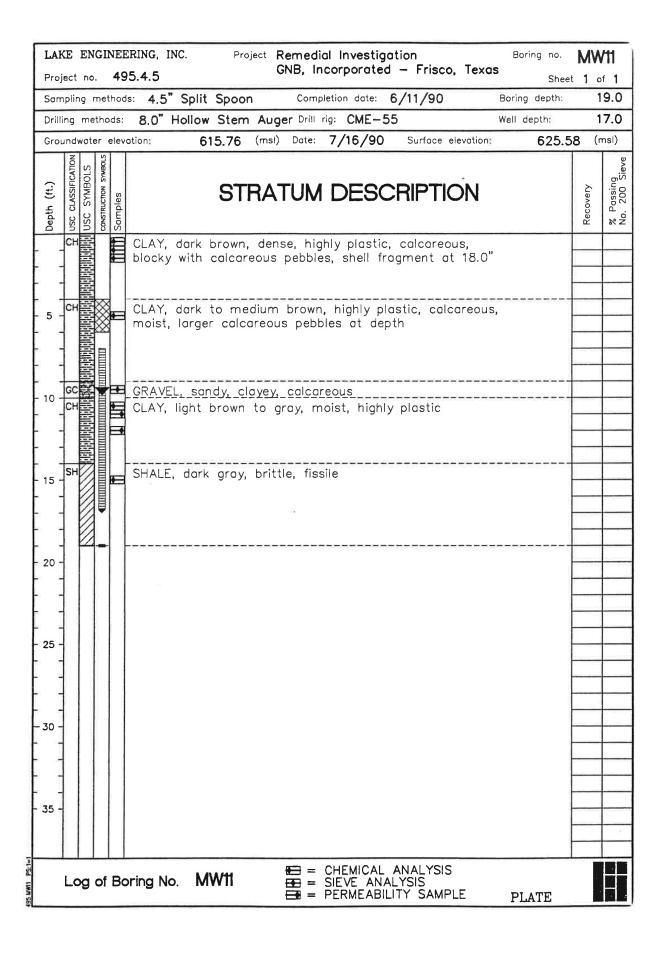
This log should not to be used separately from the report to which it is attached.

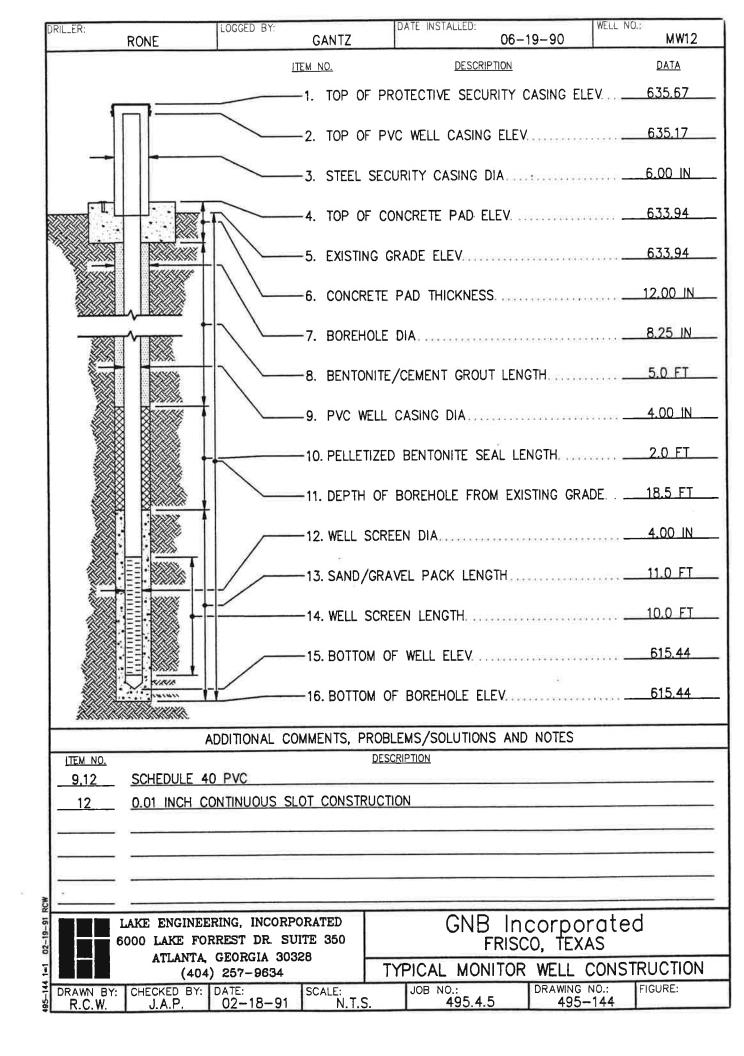
# Annular Materials

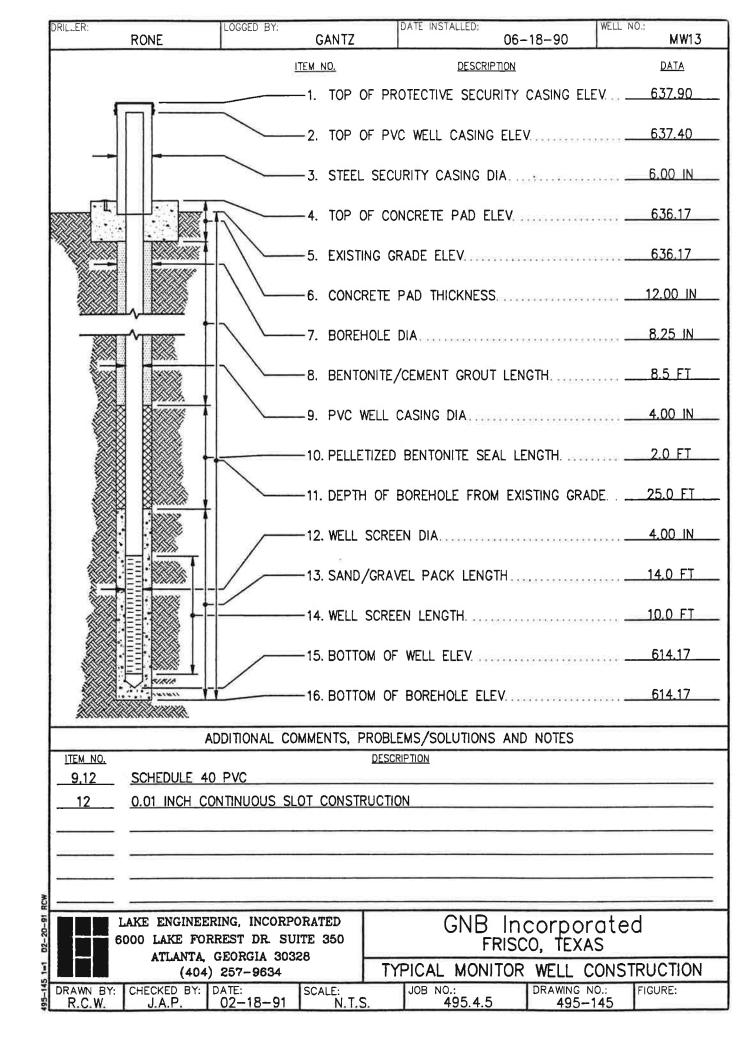
(0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hole Plug (2.5 - 20.0) 20/40 Silica Sand

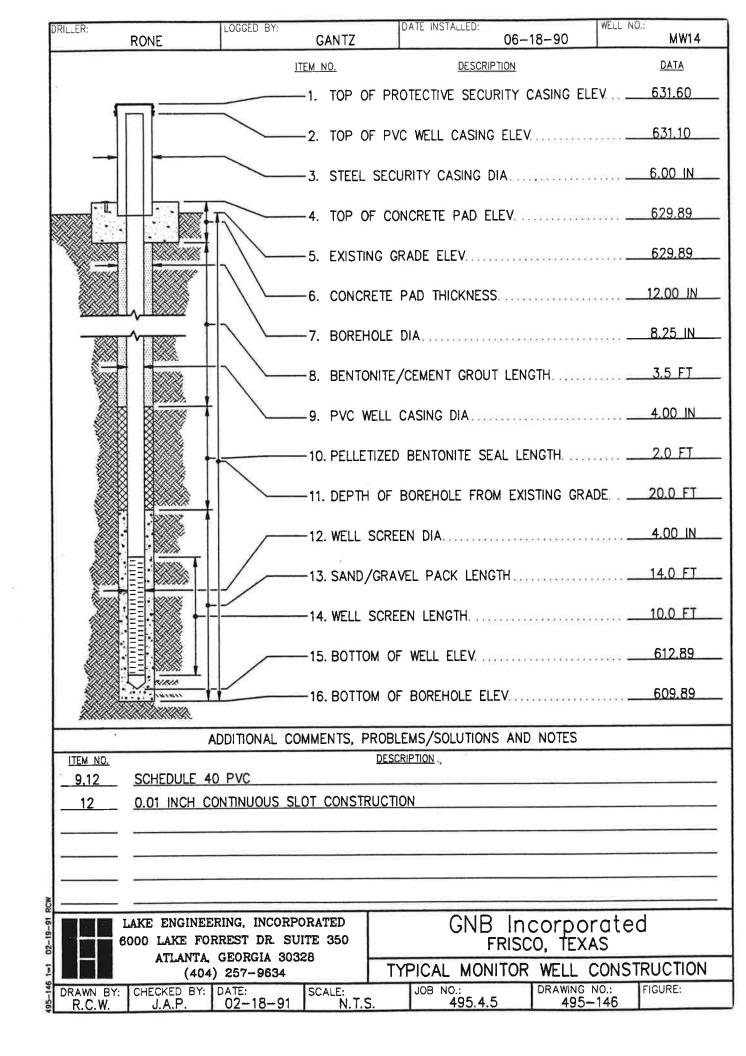
Well Materials (+3.67 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

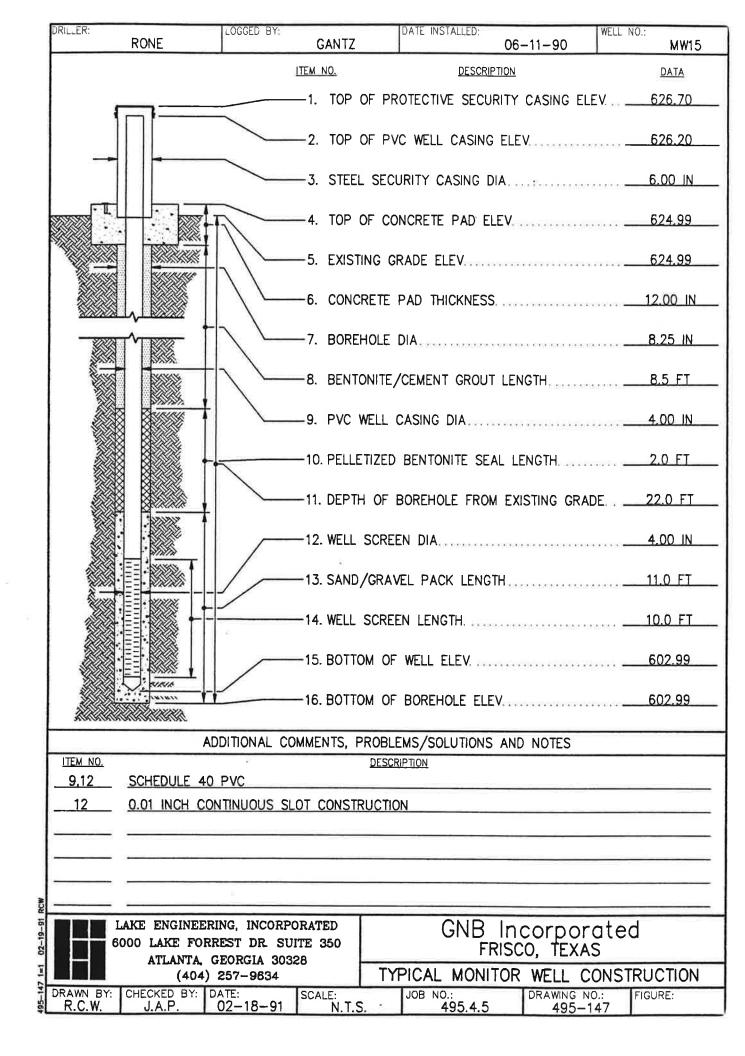


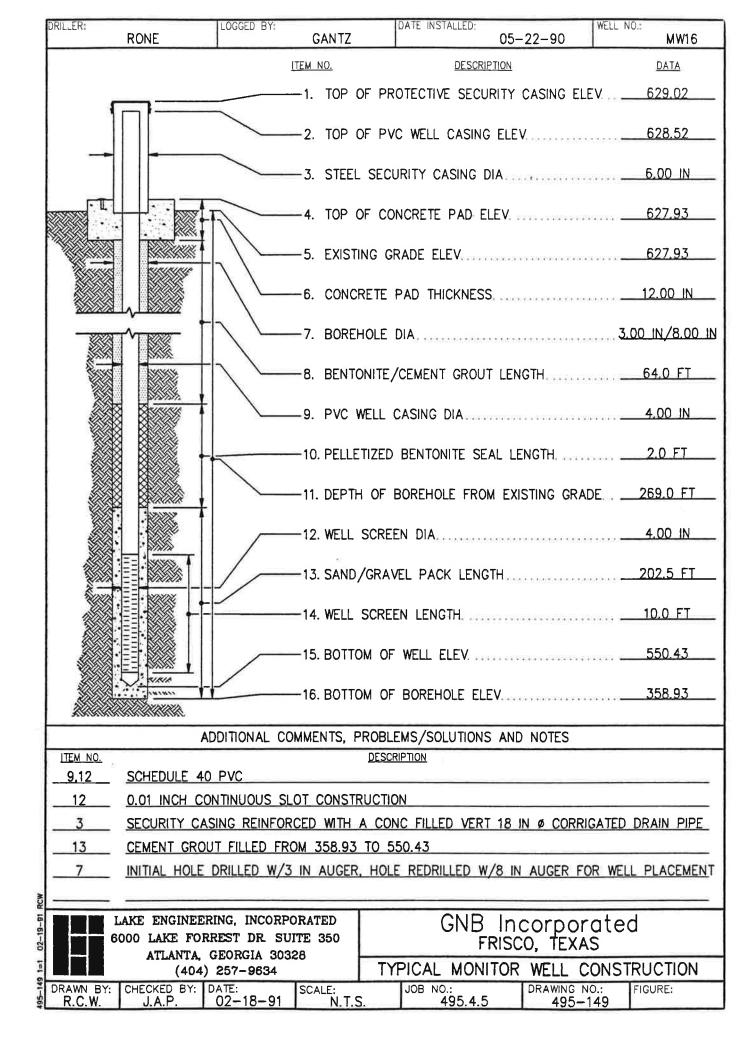


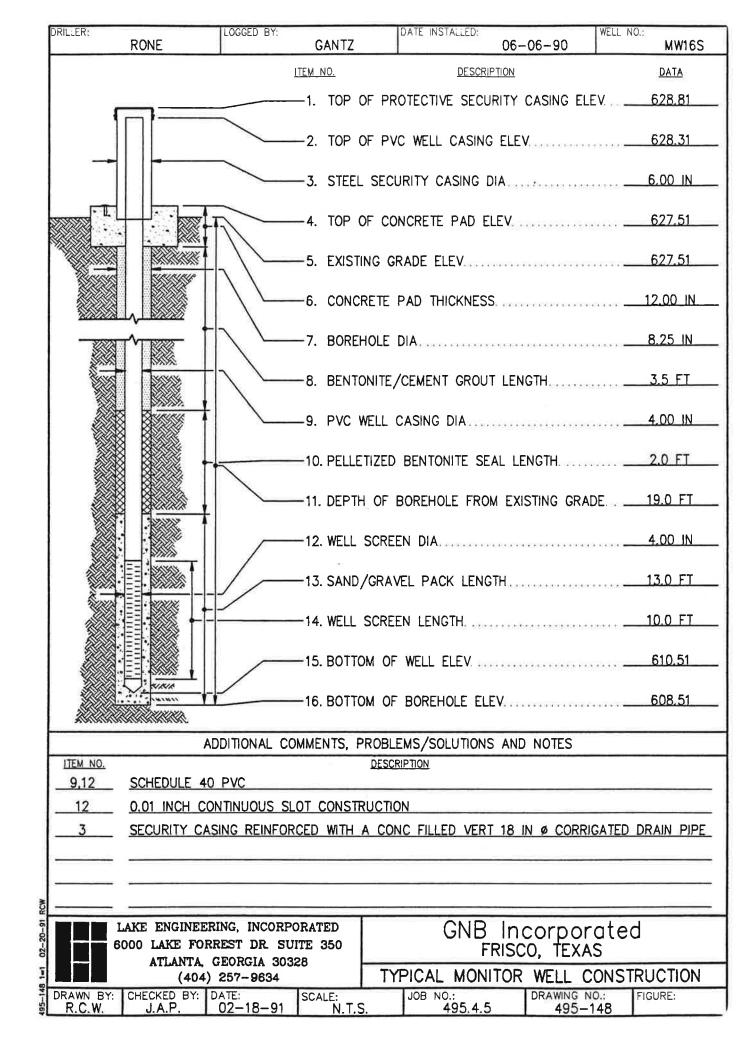


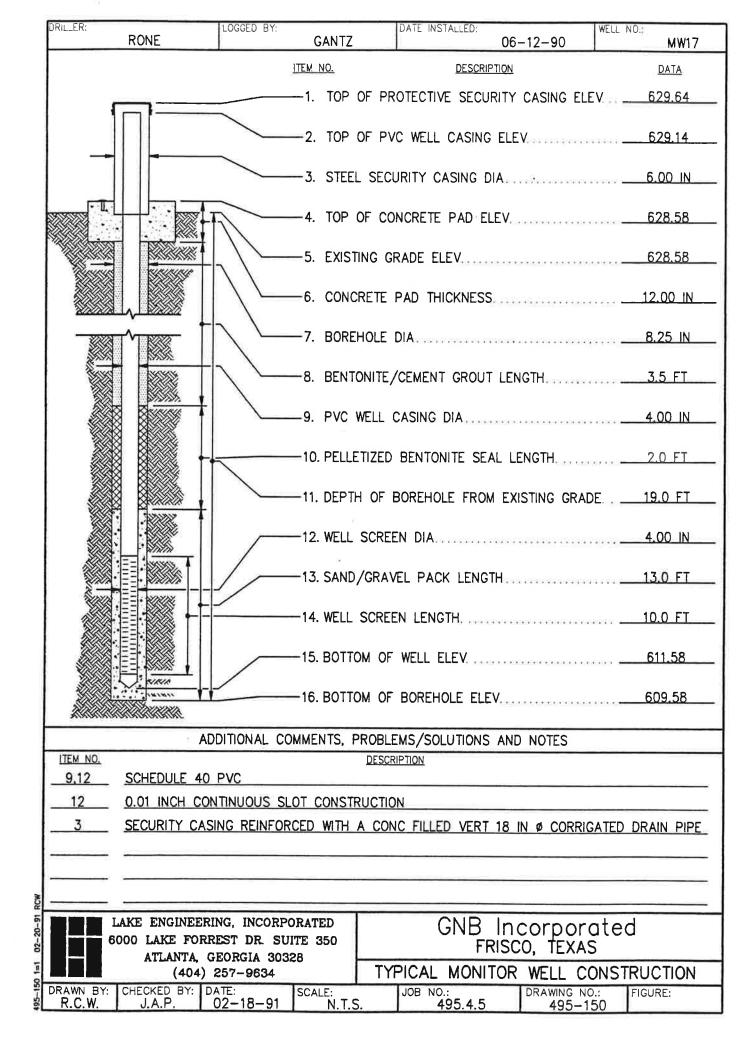


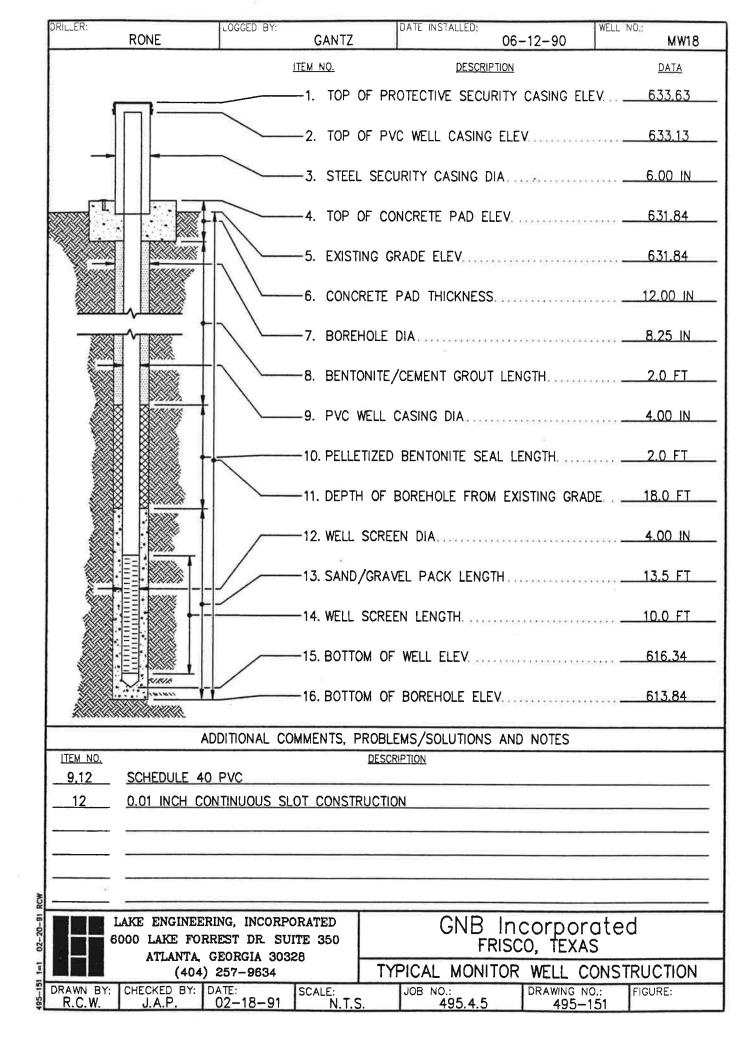












# Log of Boring: MW-19 **Exide Technologies** Completion Date: 1/12/2012 Drilling Method: HSA Frisco Recycling Center Borehole Diameter (in.): Drilling Company: StrataCore 8.25 Frisco, TX Mario Robles Total Depth (ft): 22 Driller: 7102589.0425 52694 Northing: Driller's License: Logged By: Christopher Moore, P.G. Easting: 2481314.6445 PBW Project No. 1755 Sampling Method: 3"x 5' Barrel Ground Elev. (ft AMSL): 650.33 Recovery (ff/ft) Well Depth Lithologic USCS Materials (ft) Description (0 - 6.0) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace gravel, no odor or staining observed. 3.0/5.0 2.0-3.5: with limestone gravel. 5 (6.0 - 19.2) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity. 3.7/5.0 9.5: wire fragment, possible fill/reworked material above. 10 Below 10.0: fractured, orange staining along fracture planes. 11.5-12.0: gravelly, moist to wet. 3.9/5.0 13.0-13.2: silty/gravelly, moist to wet. 13.9-14.2: gravelly, moist to wet. 15 4.5/5.0 (19.2 - 22.0) SHALE, dark gray, moist, hard, laminated, fissle. 20 SH 2.0/2.0

 $\mathbf{PBW}$ 

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Boring location hand probed to 5 feet to check for utilities.

This Log of Boring should not be used seperately from the report to which it is attached.

Annular Materials (0,0 - 1,0) Concrete (1.0 - 5,0) Bentonite Hole Plug (5,0 - 22,0) 20/40 Silica Sand Well Materials (+2,6 - 7.0) Casing, 2" Sch 40 FJT PVC (7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

Initial Fluid Level (1/16/12)

▼ Depth to water: 15.58 ft BGS

TOC Elevation (ft AMSL) 653.34

# Log of Boring: MW-20 **Exide Technologies HSA** Completion Date: 1/12/2012 Drilling Method: Frisco Recycling Center Borehole Diameter (in.): 8.25 StrataCore **Drilling Company:** Frisco, TX Mario Robles Total Depth (ft): Driller: Driller's License: 52694 Northing: 7101791.617 Christopher Moore, P.G. 2481082.2078 Easting: PBW Project No. 1755 Logged By: Ground Elev. (ft AMSL): 641.73 Sampling Method: 3"x 5' Barrel Recovery (ft/ft) Well Depth Lithologic USCS Materials Description (ft) (0 - 15.5) CLAY, CH, dark grayish brown, moist, firm, medium to high plasticity, trace sand size carbonate nodules, no odor, no staining or foreign material observed. 5.0/5.0 3.0-.3.9: some gravel size carbonate nodules. 4.0/5.0 10 5.0/5.0 15 (15.5 - 19.7) CLAY, CH, gray and yellowish brown, moist, firm, high plasticity, fractured, orange staining along fracture planes. 4.5/5.0 (19.7 - 22) SHALE, dark gray, moist, hard, laminated, fissle. 20 SH 2.0/2.0

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

Boring location hand probed to 5 feet to check for utilities.

Initial Fluid Level (1/16/12)

▼ Depth to water: 21.05 ft BGS

This Log of Boring should not be used seperately from the report to which it is attached

Annular Materials (0.0 - 1.0) Concrete (1.0 - 5.0) Bentonite Hole Plug (5.0 - 22.0) 20/40 Silica Sand Well Materials (+2.6 - 7.0) Casing, 2" Sch 40 FJT PVC (7.0 - 22.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot TOC Elevation (ft AMSL)

644.7

### Log of Boring: MW-21 **Exide Technologies** 3/5/2013 Drilling Method: **HSA/DPT** Completion Date: Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 **Drilling Company:** Frisco, TX Driller: Dan Spaust Total Depth (ft): 7102518.8983 3038M Northing: Driller's License: 2480490.8249 Tim Jennings, P.G. Easting: Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 633.66 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 635.99 Depth Well Lithologic Recovery uscs Sample Description (ft) Materials (0 - 1.0) Silty CLAY, light grayish brown, abundant orange staining (iron oxide), moist, 0-0.5 0 soft, low to medium plasticity. (1.0 - 4.0) Gravelly CLAY, light brownish orange, very moist, soft to firm, low plasticity, 0.5-2 ~20% medium gravel in clay matrix. 3,8/5,0 2-4 (4.0 - 5.0) CLAY, light grayish brown, abundant orange staining (iron oxide), moist, CH 4-5 hard, medium to high plasticity. 5 (5.0 - 5.5) Gravelly CLAY, light brown and orange, moist, firm, medium plasticity, 10-30% fine to medium gravel in clay matrix. (5.5 - 10.5) Silty CLAY, light brown, orange and gray faminations, moist, hard, medium 2.5/2.5 plasticity, heavily weathered shale. 2,5/2,5 10 (10.5 - 15.0) SHALE, gray, moist, hard, weathered shale. 2.5/2.5 2.5/2.5 15

# $\mathbf{PBW}$

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446 Notes:

This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 1.0) Concrete (1.0 - 2.5) Bentonite Hole Plug (2.5 - 15.0) 20/40 Silica Sand Well Materials

(+2.33 - 3.0) Casing, 2" Sch 40 FJT PVC (3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

	Exide <sup>-</sup>	Techn	ologi	es			Log of Borir	ng: MW-22		
	Frisco Recy Frisc	ycling Ce co, TX	nter		Drilling Driller:	tion Date: Company:	3/5/2013 Strata Core Services, LLC Dan Spaust	Drilling Method: Borehole Diameter (in.): Total Depth (ft):	15	
	PBW Projec	ct No. 17	'55		Logged Field Su	By: upervisor: ng Method:	3038M Tim Jennings, P.G. Tim Jennings, P.G. 5' Split Spoon/5' Samp Tube	Northing: Easting: Ground Elev. (ft AMSL): TOC Elev. (ft AMSL):	7102440.5654 2480046.6732 633.29 636.89	
Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sam	ple	Lithologic Description				
0		3.5/5.0 1.0/2.5 2.5/2.5 2.5/2.5	CL SH_	0-0. 0.5- 2-4 4-5	(1.4 mo (3.4 mo (5.4 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 mo (7.7 m	oist, soft, low 5 - 3.0) Silty oist, soft, low 0 - 5.0) Grav oist, soft, low 0 - 7.7) Silty 7 - 12.3) SH	CLAY, light grayish brown, at plasticity.	oundant orange staining ( n, abundant orange stain nd gray, moist, firm, medi	(iron oxide), ing (iron oxide),	



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This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 1.0) Concrete (1.0 - 2.5) Bentonite Hole Plug (2.5 - 15.0) 20/40 Silica Sand Well Materials

(+3.6 - 3.0) Casing, 2" Sch 40 FJT PVC (3.0 - 13.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

# Log of Boring: MW-23 **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: HSA/DPT Frisco Recycling Center **Drilling Company:** Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Dan Spaust Driller: 20 Total Depth (ft): Driller's License: 3038M 7102124.8425 Northing: 2480769.4386 Tim Jennings, P.G. Logged By: Easting: PBW Project No. 1755 644.32 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL): Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 644.15 Depth Well Recovery Lithologic USCS Sample (ft/ft) Materials (ft) Description (0 - 0.3) FILL, surficial fill not associated with NDA, no foreign objects (e.g. slag, 0 0-0.5 battery chips or trash) observed, sand with clay, reddish brown, moist, soft. 0.5-2 (0.3 - 2.6) FILL, surficial fill not associated with NDA, no foreign objects (e.g. slag, **822** battery chips or trash) observed, silty clay/clayey silt, trace gravel, dark reddish brown, moist, firm, low plasticity. 5.0/5.0 (2.6 - 5.5) Clayey SILT, dark reddish brown, dry, hard, low plasticity, ~15% calcareous 2-4 nodules. Мŀ 4-5 5 (5.5 - 10) Silty CLAY, light brown, moist, soft to firm, high plasticity, ~10-15% carbonate nodules in clay matrix (based on cuttings). 0.5/5.0 ĆН 10 (10 - 12.2) Gravelly, sandy CLAY; light brown, moist to wet, ~20-30% fine to medium gravel and ~10-20% fine to medium sand in clay matrix. 2.5/2.5 (12.2 - 16.2) Silty CLAY, light brown, orange and gray, moist, firm to hard, laminated, possibly heavily weathered shale. 2.5/2.5 CLICH 15 (16.2 - 17.7) SHALE, light brown, orange and gray, moist, firm, friable and weathered. 4.5/5.0 (17.7 - 20.0) SHALE, gray, moist, hard. SH 20



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This log should not to be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrete (2.0 - 3.5) Bentonite Hole Plug (3.5 - 19.5) 20/40 Silica Sand (19.5 - 20.0) Sloughed Material Well Materials (-.17 - 4.5) Casing, 2" Sch 40 FJT PVC (4.5 - 19.5) Screen, 2" Sch 40 FJT PVC, 0.010 slot

### Log of Boring: MW-24 **Exide Technologies** Completion Date: 3/5/2013 Drilling Method: HSA/DPT Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): 7.75 **Drilling Company:** Frisco, TX Driller: Dan Spaust Total Depth (ft): 3038M 7102133.0317 Driller's License: Northing: Tim Jennings, P.G. 2479613.4306 Logged By: Easting: PBW Project No. 1755 Ground Elev. (ft AMSL) 639.62 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon/5' Samp Tube TOC Elev. (ft AMSL): 642.96 Depth Well Recovery Lithologic USCS Sample (ft) Materials (ft/ft) Description 0-0.5 (0 - 5.0) Silty clay/clayey silt FILL, moist, firm, low plasticity, dry and very hard 3-5'. 0.5-2 5.0/5.0 2-4 4-5 5 (5.0 - 12.8) Gravelly clay FILL, dark brown and dark grayish brown, light brown 7.5-9.5, moist, firm to hard, medium to high plasticity, ~5-10% fine to coarse gravel fill, large 1.5/2.5 carbonate cobbles at 11'. ŘΦĎ 2.5/2.5 10 1.5/2.5 (12.8 - 15.9) Sandy clay FILL; dark reddish brown, moist, hard, low plasticity clay, iron oxide staining, very stiff. 2.5/2.5 15 1.5/2.5 (15.9 - 18.5) Silty, sandy CLAY; dark reddish brown, trace iron oxide staining, moist, firm, medium plasticity, increasing moisture downward. CŁ 2.5/2.5 (18.5 - 20.2) Clayey SILT, dark brown, wet, soft, high plasticity. MH 20 (20.2 - 23.1) Silty CLAY, grayish brown, moist to wet, firm, <5% fine calcareous nodules, wet sand interbedded at 22.5-22.6'. 3.0/3.0 CH. (23.1 - 23.7) Clayey SAND, brown, wet, soft, sub-rounded sand, ~10-20% clay in fine SW 1.0/2.0 to coarse sand. (23.7 - 27.5) Gravelly CLAY, light brown to brown, wet, firm, sub-rounded gravel, 25 medium plasticity clay, ~30-40% fine gravel in clay matrix, sandy gravel 27.3-27.5'. QĹ 1.0/2.5 (27.5 - 28.4) SHALE, light brown, orange and gray, abundant iron oxide staining, 1.5/1.5 SH weathered. (28.4 - 29.0) SHALE, gray, dry, very hard.

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

# Notes:

This log should not to be used separately from the report to which it is attached.

# Annular Materials

(0.0 - 2.0) Concrete (2.0 - 12.0) Bentonite Hole Plug (12.0 - 29.0) 20/40 Silica Sand

# Well Materials

(+3.34 - 14.0) Casing, 2" Sch 40 FJT PVC (14.0 - 29.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

### Log of Boring: MW-26 **Exide Technologies** Completion Date: 3/6/2013 **HSA Drilling Method:** Frisco Recycling Center **Drilling Company:** Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Dan Spaust Driller: Total Depth (ft): 15 3038M 7101865.0034 Driller's License: Northing: Tim Jennings, P.G. 2479876.33 Logged By: Easting: PBW Project No. 1755 Ground Elev. (ft AMSL): 628.34 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 631.93 Depth Well Recovery Lithologic **USCS** Sample (ft/ft) (ft) Materials Description (0 - 1.0) Sandy CLAY, light reddish brown, moist, firm, low plasticity. (1.0 - 5.0) Silty CLAY, dark reddish brown, trace iron oxide orange staining, moist, wet at 3', soft to firm, low plasticity. 4.0/5.0 CĽ, 5 (5.0 - 9.4) Silty CLAY, brown, moist to wet, firm, high plasticity. 1.5/2.5 ĆH 2.5/2.5 (9.4 - 10.8) Gravelly CLAY, brown, moist to wet, firm, medium plasticity clay, ~20-40% 10 fine to medium gravel. (10.8 - 13.0) Silty CLAY, light brown and orange, laminated with trace iron oxide 1.5/2.5 CL. staining, moist to wet, firm, medium plasticity. (13.0 - 15.0) SHALE, gray, orange and light brown, trace iron oxide above 14', dry, hard, very hard at 14.5 to 15', low plasticity, weathered. 1.5/2.5 SH

**PBW** 

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand Well Materials

(+3.59 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

	Exide	Techn	ologi	es				Log of Borir	ng: MW-27			
					Comp	etion	on Date: 3/6/2013 Drilling Method:		HSA/DPT			
	Frisco Rec	yclina Ce	enter		<u> </u>			Strata Core Services, LLC	Borehole Diameter (in.):			
		co, TX			Driller		npany:		` '			
								Dan Spaust 3038M	Total Depth (ft):	15		
					Driller				Northing:	7101675.2344		
	PBW Proje	ct No. 17	<b>'</b> 55		Logge			Tim Jennings, P.G.	Easting:	2480260.288 629.89		
	•				Field S		visor: 1ethod:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):			
		1		_	<del>'                                    </del>		Terrioa.	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	633.42		
Depth	Well	Recovery	uscs	Sam		JD (			ithologic			
(ft)	Materials	(ft/ft)			. (1	pm)			escription			
0 -				0.5		0.1		5) Silty CLAY, dark reddish b city, moderate hydrocarbon o		medium		
_		4.5/5.0	CL	2-4	4	-			rown, wet, very soft, low to medium			
_						0.3	plasticity, trace sand, some black staining, moderate hydrocarbon odor.					
5 —			/////	4-	5		(5.0 - 7.0) Sandy, clayey SILT; gray, moist to wet, soft, high plasticity clay,					
_		2.5/2.5	MH		1.	25.4	<5% fine gravel, moderate hydrocarbon odor.					
_			СН		65		(7.0 - 8.0) Silty CLAY, gray, moist to wet, soft, high plasticity, trace calcareous nodules, moderate hydrocarbon odor.					
10 —		2.5/2.5			1	13		11.5) Sandy, gravelly CLAY; city clay, ~10-20% fine to med				
_		2.5/2.5		0.5		(11.5	- 13.4) Gravelly CLAY, gray,	moist, firm, medium plas	ticity clay,			
_			CI.			0.5	~20-4	0% fine to medium gravel in	clay matrix.			
_		2.5/2.5	SH			1.8	weath			sticity,		
15 —		1					(14.6	- 15.0) SHALE, gray, dry, ha	rd.			

# **PBW**

Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

Notes:

This boring log should not be used separately from the report to which it is attached.

Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand

Well Materials (+3.53 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

### Log of Boring: MW-28 **Exide Technologies** Completion Date: 2/27/2013 Drilling Method: **HSA Undeveloped Buffer Property** Borehole Diameter (in.): 7.75 **Drilling Company:** Sunbelt Environmental Frisco, TX Driller: Chris Combs Total Depth (ft): 20 56033 Driller's License: Northing: 7102977.699 Roberta Russell Logged By: Easting: 2479831.956 PBW Project No. 1824 Ground Elev. (ft AMSL): 639.47 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 642.91 Recovery (ft/ft) Depth Well Lithologic PID **USCS** Description (ft) Materials (ppm) (0 - 10.8) Silty CLAY/Clayey SILT, dark reddish brown, soft to firm, low to medium 0 plasticity, calcareous nodules starting at 7.5'. 1 2 5.0/5.0 3 5 CL/ML 6 5.0/5.0 8 9 10 (10.8 - 13.5) Gravelly CLAY, yellowish brown, moist, wet at 12.8', soft to firm, low to 11 medium plasticity clay, calcareous nodues, ~10% gravel in clay matrix. 12 4.2/5.0 13 ĆĽ (13.5 - 16.5) Sandy CLAY, yellowish brown, wet, soft to firm, low plasticty clay, 14 calcareous nodules. 15 16 (16.5 - 19.5) Silty CLAY/Clayey SILT, yellowish brown, moist, soft to firm, low to 17 medium plasticity. 5.0/5.0 CL/ML 18 19 (19.5 - 20.0) SHALE, dry, hard. SH

# **PBW**

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Annular Materials

(0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hole Plug (2.5 - 20.0) 20/40 Silica Sand Well Materials

(+3.44 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

	Exide	Techn	ologi	es			Log of Borii	ng: MW-29	
	Completi						3/6/2013	Drilling Method:	HSA/DPT
	Frisco Recycling Center Drilling					Company:	Strata Core Services, LLC	Borehole Diameter (in.):	7.75
	Frisc	o, TX			Driller:		Dan Spaust	Total Depth (ft):	15
					Driller's	s License:	3038M	Northing:	7101741.6829
	DDW Drois	ot No. 17	755		Logge	d By:	Tim Jennings, P.G.	Easting:	2480041.8696
	PBW Proje	CUNO. 17	55		Field S	Supervisor:	Tim Jennings, P.G.	Ground Elev. (ft AMSL):	629.39
					Sampl	ing Method:	5' Split Spoon/5' Samp Tube	TOC Elev. (ft AMSL):	633.51
Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sam	ple		Lithol Descri		
0				0-0.			CLAY/Clayey SILT, dark reddis		
_		0			2 0-	·0.5', moist, w	et at 4', firm to hard, low plas	ticity, clayey gravel lens f	rom 2.6-2.7'.
_		5.0/5.0 <b>CL/M</b> L		2-4					
5 -				4-5	5				
5 -		2.5/2.5					CLAY, dark grayish brown, n I in silty clay matrix at 5-5.8'.	noist to wet, firm, high pla	sticity, fine to
10 —		1.5/2.5	СH		(8	5.0 - 11.4) Silt	y CLAY, light brown, moist, fi	rm, high plasticity, <5% fi	ne gravel.
-		1.5/2.5				1.4 - 14.0) S asticity, weat	HALE, gray and orange, trace hered.	e iron oxide, moist, firm to	hard, medium
-		2.5/2.5	SH		(1	4.0 - 15.0) S	HALE, gray, dry, hard.		

**PBW** 

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This log should not to be used separately from the report to which it is attached.

Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 14.5) 20/40 Silica Sand (14.5 - 15.0) Sloughed Material Well Materials

(+4.12 - 4.5) Casing, 2" Sch 40 FJT PVC (4.5 - 14.5) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: MW-30 **Exide Technologies** Completion Date: 3/28/2013 HSA Drilling Method: Frisco Recycling Center Strata Core Services, LLC Borehole Diameter (in.): **Drilling Company:** 7.75 Frisco, TX Driller: Dan Spaust Total Depth (ft): 32.5 3038M Driller's License: Northing: 7102086.1889 Tim Jennings, P.G. 2480011.0566 Logged By: Easting: PBW Project No. 1755 645.483805 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 645.148475 Depth Well Recovery Lithologic **USCS** Sample (ft) Materials (ft/ft) Description //QL// 0-0.5 (0 - 0.5) Sandy Gravelly CLAY, dark grayish brown, moist, firm, medium plasticity, 0 ~10-20% fine to coarse sand, ~20-30% fine to coarse gravel and cobbles (railroad 0.5-2 balast). (0.5 - 5.0) No Recovery 0.5/5 NR 2-4 4-5 5 (5.0 - 20.9) FILL, silty clay, dark grayish brown, moist to wet, soft, medium to high plasticity, trace of fine gravel, 1.3/5 10 1/2.5 2.5/2.5 15 <u>P</u>QQ 2/5 20 2.5/2.5 (20.9 - 26.5) FILL, gravelly clay, light brown, wet, soft, high plasticity, ~30-40% fine gravel in clay matrix, wood fragments locally to 25'. 2.5/2.5 25 2.5/2.5 (26.5 - 28.5) FILL, gravelly clay, wet, firm to hard, medium plasticity, ~40-50% fine to medium gravel in clay matrix, pieces of slag/lead at 28', shell fragments at 28-28.5'. 2.5/2.5 (28.5 - 30.5) SHALE, gray and orange, abundant fe ox staining, wet, hard, medium 30 SH (30.5 - 32.5) SHALE, gray, moist, no cementation, very hard. 2.5/2.5

### **PRW**

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### Notes:

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### Annular Materials

(0.0 - 2.0) Concrete (2.0 - 10.0) Bentonite Hole Plug (10.0 - 32.5) 20/40 Silica Sand

### Well Materials

(0 - 12.0) Casing, 2" Sch 40 FJT PVC (12.0 - 32.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

### Log of Boring: MW-31 **Exide Technologies** Completion Date: 5/9/2013 Drilling Method: **HSA** Frisco Recycling Center Drilling Company: Strata Core Services, LLC Borehole Diameter (in.): 7.75 Frisco, TX Margarito Estrada Total Depth (ft): Driller: Driller's License: 58164 7102001.9818 Northing: Tim Jennings, P.G. Easting: 2479800.4009 Logged By: PBW Project No. 1755 Ground Elev. (ft AMSL): 637.17 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 636.71 Depth Well Recovery Lithologic USCS Sample (ft) Materials (ft/ft) Description (0 - 0.9) CONCRETE SLAB CON (0.9 - 5.8) FILL, clayey sand and sandy clay, orange, trace iron oxide nodules. 0.9-2 4/5 ercc (5.8 - 8) FILL, silty clay, trace fine gravel, moist to wet, dark brown, trace battery chips at 5.8-8', wet at 9.5', slag observed. 5.8-8 5/5 (8 - 16) Silty clay, dark brown. 9.5 10 5/5 15 ĆĽ (16 - 21) Silty CLAY and clayey SILT, trace gravel and sand, greater sand content with depth, yellowish brown. cuttings 20 (21 - 22) Gravelly CLAY, ~20% fine to medium gravel in clay matrix. (22 - 24) SHALE potentially, drilling more difficult. SH

## **PBW**

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### Notes:

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### Annular Materials

(0.0 - 2.0) Concrete (2.0 - 6.0) Bentonite Hole Plug (6.0 - 23.0) 20/40 Silica Sand

### Well Materials

(0 - 8.0) Casing, 2" Sch 40 FJT PVC (8.0 - 23.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

Golder Associates	FLUSH-MO	OUNT MONITORING	G WELL CONSTRU	CTION LOG _	MW-32
PROJECT NAME: Ex	ide Frisco		PROJECT NUMBER:	130-2086	
SITE NAME: Former		ing Facility		co, Texas	
CLIENT: Exide Tech		ing radiity	SURFACE ELEVATION		SI
GEOLOGIST: RMS		NORTHING: 710192		EASTING: 247983	
DRILLER: Dan Spar			L: 4.16 FT BTOC		
DRILLING COMPANY	***************************************	TOWNIO WITERCEEVE	DRILLING METHODS	***************************************	1/14/2014
	4.4.4.4	4 4 4 4 4 4	VELL PROTECTER BROUND SURFACE ELEVATOR		MSL MSI
\$ P. S.		8 8 8 8 8 8 8	OF OF CASING ELEVATION	1	110L
LOCKING CAP: (ES	// NO)	<b>7</b>	NAMETER OF RISER PIPE ( NAMETER OF BOREHOLE (	· ·	0 25
		C	ONCRETE SEAL DEPTH (ft	. bgs):0.	5
			YPE AND AMOUNT OF ANI	NULAR SEAL: N/	Α
	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T	OP OF BENTONITE SEAL D	SEPTH (ff has): 0.	5
			YPE AND AMOUNT OF BEN	, ,,	hips (~20 lbs)
				A	
		1	OP OF SAND PACK DEPTH	(II. D93).	· · · · · · · · · · · · · · · · · · ·
		• 1	ENTRALIZER (yes /(no)) -	_	
		4	OP OF SCREEN DEPTH (ft.	-90).	.5
		Ţ	YPE OF SCREEN:	SCH 40 PVC slotte	ed
		s	CREEN SLOT SIZE (in.): _		
		j s	IZE OF SAND PACK:		
		A	MOUNT OF SAND:	75 lt	os
		B	OTTOM OF SCREEN DEPT	H (ft. bgs):5.	0
TOTAL CARACT		В	OTTOM OF WELL DEPTH (	ft. bgs):5.	0
TOTAL DEPTH OF BOREHOLE			OTTOM OF FILTER PACK (	ft. bas): 5.	0
(ft. bgs):	5.0		YPE AND AMOUNT OF BAC	3 - /	

CHECKED BY: \_\_\_\_\_\_JDJ/TRM\_
DATE CHECKED: \_\_01/28/14: 5/12/14

ADDITIONAL NOTES: Static water level collected 01/21/2014.

PREPARED BY: RMS

Golder Associates FLU	JSH-MOUNT MONITOR	ING WELL CONSTR	UCTION LOG MW-33
PROJECT NAME: Exide Fris	SCO	PROJECT NUMBER	: 130-2086
SITE NAME: Former Exide	Recycling Facility		sco, Texas
CLIENT: Exide Technologi			ON: 633.08 FT AMSL
GEOLOGIST: RMS	NORTHING: 7101	1871.99 FT	EASTING: 2480020.99 FT
DRILLER: Dan Spaust	STATIC WATER L	EVEL: 1.09 FT BTOC	COMPLETION DATE: 1/14/2014
DRILLING COMPANY: SCI		DRILLING METHOD	S: HSA
LOCKING CAP: (FE) / NO)	STEEL FLUSH MOUN	NT WELL PROTECTER  GROUND SURFACE ELEVATION TOP OF CASING ELEVATION	ATION: 632.93 FT AMSL DN: 632.59 FT AMSL
LOCKING CAP: (FEST NO)		- DIAMETER OF RISER PIPE	(in.): 2.0
		<ul> <li>DIAMETER OF BOREHOLE</li> </ul>	0.05
	4 4 4	CONCRETE SEAL DEPTH (	0.5
		— TYPE AND AMOUNT OF AN	NNULAR SEAL: N/A
	1000	TOP OF BENTONITE SEAL	DEPTH (ft. bgs);0.5
	•		ENTONITE SEAL: Bent chips (~25 lbs)
		TOP OF SAND PACK DEPT	TH (ft. bas): 1.5
		- CENTRALIZER (yes /(no)) -	K3/A
		TOP OF SCREEN DEPTH (	^ <b>~</b>
		TYPE OF SCREEN:	SCH 40 PVC slotted
		SCREEN SLOT SIZE (in.):	0.040
		SIZE OF SAND PACK:	20/40
		AMOUNT OF SAND:	75 lbs
		- BOTTOM OF SCREEN DEP	TH (ft. bgs): 5.0
		- BOTTOM OF WELL DEPTH	(ft. bgs): 5.0
TOTAL DEPTH OF BOREHOLE (ft. bgs): 5.0		- BOTTOM OF FILTER PACK - TYPE AND AMOUNT OF BA	
	water level collected 01.		

CHECKED BY: \_\_\_\_\_\_JDJ/TRM\_

DATE CHECKED: \_\_\_\_01/28/14; 05/12/14 PREPARED BY: \_\_\_\_\_\_

RMS

Golder	FLUSH-MC	DUNT MONITORIN	G WELL CONSTRU	CTION LOG	MW-34
Associates					
ROJECT NAME: Exide Frisco			PROJECT NUMBER:	130-2086	
SITE NAME: Former Exide Recycling Facility			LOCATION: Frisc	o, Texas	
NT: Exide Techi	nologies		SURFACE ELEVATIO	N: 633.17 FT AI	MSL
LOGIST: RMS		NORTHING: 71018		<b>EASTING: 24800</b>	
ER: Dan Spau	st	STATIC WATER LEV	EL: 4.31 FT BTOC	COMPLETION DA	TE: 1/14/2014
ING COMPANY:	SCI		DRILLING METHODS	: HSA	
		STEEL FLUSH MOUNT	GROUND SURFACE ELEVAT	<sub>FION:</sub> 633.15 FT /	AMSL
7 7 7 7	A 4 4 A A A A A	7 8 7 8 8 8 8	TOP OF CASING ELEVATION	راد <u>632.83 FT ب</u>	AMSL
OCKING CAP: (FE)/	NO)		DIAMETER OF RISER PIPE ( DIAMETER OF BOREHOLE (	in.):	2.0 8.25
	4.		CONCRETE SEAL DEPTH (ft	han	0.5
			TYPE AND AMOUNT OF AND		N/A
		-	TOP OF BENTONITE SEAL DETERMINED FOR THE SEAL DEPTHEMENT OF SAND PACK DEPTHEMENT OF THE SEAL DEPTHEMENT OF THE SEA	NTONITE SEAL: Bent	0.5 : chips (~25 lbs) 1.5 N/A
			CENTRALIZER (yes /@) -	111 =:	2.5
			FOP OF SCREEN DEPTH (ft.	- 3 - 7 -	***************************************
		•	TYPE OF SCREEN:	SCH 40 PVC slo	
			SCREEN SLOT SIZE (in.):		010
		1	SIZE OF SAND PACK:		)/40
		,	AMOUNT OF SAND:		lbs
			SOTTOM OF SCREEN DEPT	H (ft. bgs):	5.0
			BOTTOM OF WELL DEPTH (	ft. bgs);	5.0
OTAL DEPTH F BOREHOLE	**************************************		BOTTOM OF FILTER PACK (	ft. bas):	5.0
bgs): 5.	0		TYPE AND AMOUNT OF BAC	3-/	N/A
ODITIONAL NOTES: _	Static water I	evel collected 01/2	1/2014.		
		<del>.</del>			<del></del>

JDJ/TRM CHECKED BY: \_\_\_ DATE CHECKED: 01/28/14; 05/12/14

PREPARED BY: \_\_\_\_

RMS

Golder FL	USH-MO	UNT MONITORIN	G WELL CONSTRU	JCTION LOG	MVV-35
PROJECT NAME: Exide Frisco PROJECT NUMBER: 130-2086				130-2086	
TE NAME: Former Exide	Recyclin	ng Facility		co, Texas	
IENT: Exide Technolog		<del>7</del>	SURFACE ELEVATION		MSL
EOLOGIST: RMS		NORTHING: 71017		EASTING: 2480	
RILLER: Dan Spaust		STATIC WATER LEV		COMPLETION DA	
RILLING COMPANY: SCI	L	mm 1971.	DRILLING METHODS		
LOCKING CAP: ((E9/NO)			VELL PROTECTER  BROUND SURFACE ELEVATION  TOP OF CASING ELEVATION  DIAMETER OF RISER PIPE  DIAMETER OF BOREHOLE	N: 632.55 FT	2.0 8.25
			CONCRETE SEAL DEPTH (1	• /	0.5 N/A
	1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0		OP OF BENTONITE SEAL		0.5
			YPE AND AMOUNT OF BE	NTONITE SEAL: Ben	t chips (~25 lbs
	938 GSS	<b>■</b>	OP OF SAND PACK DEPTH	-f (ft. bgs):	1.5
		<b>-</b>	ENTRALIZER (yes /no) -	TYPE:	N/A
			OP OF SCREEN DEPTH (ft		2.5
			YPE OF SCREEN:		tted
				^	.010
			SCREEN SLOT SIZE (in.);	-	0/40
			SIZE OF SAND PACK:		5 lbs
		<i>F</i>	MOUNT OF SAND:		7 103
			OTTOM OF SCREEN DEPT	FH (ft. bgs):	5.0
TOTAL DEPTH		B	OTTOM OF WELL DEPTH (	(ft. bgs):	5.0
OF BODEHOLE	×××××	B	OTTOM OF FILTER PACK	(ft. bgs):	5.0
(ft. bgs): 5.0	water lo	Ţ	YPE AND AMOUNT OF BA		N/A
ADDITIONAL NOTES: Static	water ie	ver conected 01/21	12014.		**************************************

CHECKED BY: JDJ/TRM

DATE CHECKED: 01/28/14; 05/12/14

PREPARED BY: \_

RMS

***	ity LOCATION:	MBER: 130-2086 Frisco, Texas EVATION: 633.94	
ogies NORTHI	SURFACE ELE		FT AMSI
NORTHI		EVATION: 633.94	LET AMSI
***	NG: 7101814 87 FT		
STATIC	10. 1101011.0111	EASTING:	2480273.51 FT
	WATER LEVEL: DRY	COMPLET	ION DATE: 1/14/2014
:	DRILLING MET	THODS: HSA	
	GROUND SURFACE TOP OF CASING ELE	EVATION:633.6	33 FT AMSL
6 i i			
A	DIAMETER OF BORE	=HOLE (M.);	W
2.4	CONCRETE SEAL DI	EPTH (ft. bgs):	0.5
			• •
	TYPE AND AMOUNT	OF BENTONITE SEAL	
<b>⊘</b> ⊘ −			
	CENTRALIZER (yes	/@ - TYPE:	N/A
	TOP OF SCREEN DE	PTH (ft. bgs);	2.5
	TYPE OF SCREEN:	SCH 40 P\	/C slotted
	SCREEN SLOT SIZE	(in.):	0.010
		• •	00/40
	AMOUNT OF SAND:		75 lbs
	BOTTOM OF SCREEN	N DEPTH (ft. bgs):	5.0
	BOTTOM OF WELL D	DEPTH (ft. bgs):	5.0
	BOTTOM OF FILTER	PACK (ft. bgs):	5.0
	TYPE AND AMOUNT	OF BACKFILL:	N/A
	44 44	TOP OF CASING ELL  DIAMETER OF RISE DIAMETER OF BORE  CONCRETE SEAL D  TYPE AND AMOUNT  TOP OF BENTONITE  TYPE AND AMOUNT  TOP OF SAND PACK  CENTRALIZER (yes TOP OF SCREEN DE  TYPE OF SCREEN: SCREEN SLOT SIZE SIZE OF SAND PACK  AMOUNT OF SAND: BOTTOM OF SCREE  BOTTOM OF WELL D  BOTTOM OF FILTER	GROUND SURFACE ELEVATION: 633.8

RMS

PREPARED BY: \_\_\_\_

DATE CHECKED: 01/28/14: 05/12/14

Golder Associates	FLUSH-MOUNT MONI	TORING WELL CONSTRUCTION LOG	MW-37
PROJECT NAME: Exi	de Frisco	PROJECT NUMBER: 130-2086	**************************************
SITE NAME: Former	Exide Recycling Facility	LOCATION: Frisco, Texas	
CLIENT: Exide Tech	nologies	SURFACE ELEVATION: 621.50 FT A	MSL
GEOLOGIST: RMS	NORTHING:	7102342.00 FT EASTING: 24790	077.35 FT
DRILLER: Dan Spau	ist STATIC WAT	TER LEVEL: 8.11 FT BTOC   COMPLETION DA	ATE: 1/14/2014
DRILLING COMPANY:		DRILLING METHODS: HSA	
	STEEL FLUSH	I MOUNT WELL PROTECTER  GROUND SURFACE ELEVATION: 621.20 FT	AMSL
LOCKING CAP: (YE)	(NO)	TOP OF CASING ELEVATION: 620.95 FT	AMSL
	8 2	DIAMETER OF RISER PIPE (in.):	2.0
	44 44	DIAMETER OF BOREHOLE (in.):	8.25
	4 4	CONCRETE SEAL DEPTH (ft. bgs);	2.0*
		TYPE AND AMOUNT OF ANNULAR SEAL:	N/A
		TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2.0  TYPE AND AMOUNT OF BENTONITE SEAL: Ben	
		TOP OF SAND PACK DEPTH (ft. bgs):	3.0
		CENTRALIZER (yes /(no)) - TYPE:	N/A
		TOP OF SCREEN DEPTH (ft. bgs);	5.0
		TYPE OF SCREEN: SCH 40 PVC slo	tted
			010
		- · · · · · · · · · · · · · · · · · · ·	0/40
			lbs
			10.0
TOTAL DEPTH		BOTTOM OF WELL DEPTH (ft. bgs):	0.0
OF BOREHOLE (ft. bgs): 10	.0	BOTTOM OF FILTER PACK (ff. bgs):1 TYPE AND AMOUNT OF BACKFILL:	0.0 N/A
(ft. bgs): 10	Static water level collecte is concrete is 2 feet thick.	BOTTOM OF WELL DEPTH (ft. bgs): 1  BOTTOM OF FILTER PACK (ft. bgs): 1  TYPE AND AMOUNT OF BACKFILL:	0.0

Golder	FLUSH-MOUNT MONITO	PRING WELL CONSTRUCTION LOG MW-3	38
PROJECT NAME: Exic	de Frisco	PROJECT NUMBER: 130-2086	- Anhastra
	Exide Recycling Facility	LOCATION: Frisco, Texas	
CLIENT: Exide Techi		SURFACE ELEVATION: 623.71 FT AMSL	
GEOLOGIST: RMS		02173.07 FT EASTING: 2479348.55 FT	Г
DRILLER: Dan Spau	**************************************	LEVEL: 7.10 FT BTOC   COMPLETION DATE: 1/14/2	
DRILLING COMPANY:		DRILLING METHODS: HSA	
\$	STEEL FLUSH MC	OUNT WELL PROTECTER  GROUND SURFACE ELEVATION: 623.50 FT AMSL  TOP OF CASING ELEVATION: 623.14 FT AMSL	
LOCKING CAP: (YES)/	/NO) 8	—— DIAMETER OF RISER PIPE (in.):	
		— DIAMETER OF BOREHOLE (in.): 8.25	
I	A 12 A	CONCRETE SEAL DEPTH (ft. bgs): 2.0*	
		TYPE AND AMOUNT OF ANNULAR SEAL: N/A	
		TOP OF BENTONITE SEAL DEPTH (ff. bgs): 2.0  TYPE AND AMOUNT OF BENTONITE SEAL: Bent chips (50	iO lbs
ı	63 88 T	TOP OF SAND PACK DEPTH (fl. bgs): 3.0	
ı		CENTRALIZER ( yes (no) - TYPE: N/A	
		TOP OF SCREEN DEPTH (ft. bgs):5.0	
		TYPE OF SCREEN: SCH 40 PVC slotted	
		SCREEN SLOT SIZE (in.): 0.010	
		SIZE OF SAND PACK: 20/40	
		AMOUNT OF SAND: 325 lbs	
		BOTTOM OF SCREEN DEPTH (ft. bgs): 15.0	
TOTAL DEPTH		BOTTOM OF WELL DEPTH (ft. bgs):15.0	- Vining and All Control of the Cont
OF BOREHOLE	^	— BOTTOM OF FILTER PACK (ft. bgs): 15.0	
(ft. bgs):	.U	— TYPE AND AMOUNT OF BACKFILL: N/A	
(ft. bgs): 15.  ADDITIONAL NOTES: -	Static water level collected (es concrete is 2 feet thick.	TYPE AND AMOUNT OF BACKFILL: N/A	

CHECKED BY: \_\_\_\_\_\_JDJ/TRM\_

DATE CHECKED: \_\_\_01/28/14; 05/12/14 PREPARED BY: \_\_\_\_RMS

Golder	ABOVE GI	ROUND MONITOR	RING WELL CONSTR	RUCTION LOG	MW-39
PROJECT NAME: Exide	Frisco		PROJECT NUMBER:	130-2086	
SITE NAME: Former Exi	de Recycli	ng Facility	LOCATION: Frisco, Texas		
CLIENT: Exide Technological	ogies		SURFACE ELEVATIO	N: 640.29 FT AMSL	_
GEOLOGIST: RMS				EASTING: 2479631.	
DRILLER: Dan Spaust		STATIC WATER LE	VEL: 10.41 FT BTOC		01/14/2014
DRILLING COMPANY: SC	<u> </u>		DRILLING METHODS	: HSA	
STICK UP: 3.0 FT		P W GF	OP OF CASING ELEVATION: _ PROTECTIVE CASING (ves) r EA GRAVEL OR SAND NONE EEP HOLE ROUND SURFACE ELEVATION  AMETER OF RISER PIPE (in.): AMETER OF BOREHOLE (in.): DNCRETE SEAL DEPTH (ft. bg	Steel  N: 637.26 FT AN  : 2.0 : 8.25 gs): 2.0*	
			PE AND AMOUNT OF ANNUL		
	•	TY	PE AND AMOUNT OF BENTO	NITE SEAL: Bent chip	s (100 lbs)
			OP OF SAND PACK DEPTH (ft.	7.0	
			ENTRALIZER (yes /(no)) - TYI	* * * * * * * * * * * * * * * * * * * *	
			OP OF SCREEN DEPTH (ft. bgs	400	
				H 40 PVS slotted	
			CREEN SLOT SIZE (in.):	0.040	
			ZE OF SAND PACK:	20140	
			MOUNT OF SAND:	050 !!	
			OTTOM OF SCREEN DEPTH (	00.0	•
TOTAL DEDTIL		ВС	OTTOM OF WELL DEPTH (ft. b	ogs): 20.0	
TOTAL DEPTH OF BOREHOLE (ft. bgs):  20.0			OTTOM OF FILTER PACK (ft. b /PE AND AMOUNT OF BACKF		
ADDITIONAL NOTES: Static w * Driller indicates concrete is 2		cted 01/21/2014.			
	DJ/TRM 28/14; 5/12	/ <b>1</b>		PREPARED BY:	RMS

Golder	ABOVE GI	ROUND MONITORI	NG WELL CONST	RUCTION LOGMW-40
PROJECT NAME: Ex	ido Erisco		PROJECT NUMBER:	120 2006
SITE NAME: Former		ng Facility	LOCATION: Frisco,	
CLIENT: Exide Tech		ng r acinty		DN: 636.03 FT AMSL
GEOLOGIST: RMS	illologics	NORTHING: 710256	88.11 FT	EASTING: 2479899.95 FT
DRILLER: Dan Spau	ıst			COMPLETION DATE: 01/14/2014
DRILLING COMPANY		J,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DRILLING METHODS	
STICK UP: 3.0 FT		PE. WEI GRO	ROTECTIVE CASING (VES) A GRAVEL OR SAND None FP HOLE	e  N: 633.00 FT AMSL  2.0  8.25  9s): 2.0*
TOTAL DEPTH OF BOREHOLE (ft. bgs):  ADDITIONAL NOTES: St * Driller indicates concrete	atic water level collec	TYP  TOP  CEN  TOP  TYP  SCR  SIZE  AMC  BOT  BOT  TYP	OF BENTONITE SEAL DEFE E AND AMOUNT OF BENTO OF SAND PACK DEPTH (ft. bg OF SCREEN DEPTH (ft. bg E OF SCREEN:	DNITE SEAL: Bent chips (50 lbs)  3.0  PE: N/A  s): 5.0  H 40 PVS slotted  0.010  20/40  325 lbs  ft. bgs): 15.0  pgs): 15.0  15.0
CHECKED BY: DATE CHECKED: _0	JDJ/TRM 1/28/14; 5/12/	14		PREPARED BY: RMS

Golder	ABOVE GI	ROUND MONITORING WELL CONSTRUCTION LOG	MW-41		
PROJECT NAME: Ex	ide Frisco	PROJECT NUMBER: 130-2086	PROJECT NUMBER: 130-2086		
SITE NAME: Former	Exide Recycli	ling Facility LOCATION: Frisco, Texas			
CLIENT: Exide Tech		SURFACE ELEVATION: 642.75 FT A			
GEOLOGIST: RMS		NORTHING: 7102693.17 FT EASTING: 2480			
DRILLER: Dan Spau	ıst	STATIC WATER LEVEL: 16.38 FT BTOC COMPLETION D	ATE: 01/14/2014		
DRILLING COMPANY	: SCI	DRILLING METHODS: HSA			
STICK UP: 3.5 FT	100	CONCRETE SEAL DEPTH (ft. bgs):	eel		
	he borehole collapse	TYPE AND AMOUNT OF BENTONITE SEAL: Bent  TOP OF SAND PACK DEPTH (ft. bgs):	4.0 I/A 3.0 ed 10 I/40 Ibs 3.0 3.0		
Static water level collecte  * Driller indicates concret					
Disso, moloco domolo	- I - I - I - I - I - I - I - I - I - I				
CHECKED BY:	JDJ/TRM 01/28/14; 5/12	_ 2/1 <b>:4</b> PREPARED BY:	RMS		

Golder ABOVE O	ROUND MONITOR	ING WELL CONST	RUCTION LOG MW-42
PROJECT NAME: Exide Frisco		DDO JEOT NUMBER	420.0000
SITE NAME: Former Exide Recyc	ling Encility	PROJECT NUMBER: LOCATION: Frisco,	
CLIENT: Exide Technologies	anig i acinty	· · · · · · · · · · · · · · · · · · ·	ON: 642.90 FT AMSL
GEOLOGIST: RMS	NODTHING: 71036		
DRILLER: Dan Spaust	STATIC MATERIES	751.00 F I	EASTING: 2480711.60 FT
DRILLING COMPANY: SCI	STATIC WATER LEV	DRILLING METHODS	COMPLETION DATE: 01/14/2014
LOCK LOCK	_ CAP TOI		642.24 FT AMSL
STICK UP: 4.0 FT	<b>←</b>	ROTECTIVE CASING (ves)	no): Steel
	PE	A GRAVEL OR SAND Non	
		METER OF RISER PIPE (in. METER OF BOREHOLE (in.)	2.05
<u> </u>			0.0*
		NCRETE SEAL DEPTH (ft. b	N//A
		P OF BENTONITE SEAL DEI	PTH (ft. bgs): 2.0 ONITE SEAL: Bent chips (50 lbs)
			^ ^
<b>89 33</b>	TOP	P OF SAND PACK DEPTH (f	
	CEN	NTRALIZER (yes/no) - TY	
	TOP	P OF SCREEN DEPTH (ft. bg	gs):5.0
	TYF	PE OF SCREEN: SC	CH 40 PVS slotted
		REEN SLOT SIZE (in.):	0.040
		E OF SAND PACK:	
		OUNT OF SAND:	000 !!
		TOM OF SCREEN DEPTH (	15.0
TOTAL DEPTH	ВОТ	TTOM OF WELL DEPTH (ft. )	
OF BOREHOLE	<b>■</b> BO1	TOM OF FILTER PACK (ft. 1	
(ft. bgs): 15.0		E AND AMOUNT OF BACK!	
ADDITIONAL NOTES: Three bollards installes Static water level collected 01/21/2014.  * Driller indicates concrete is 2 feet thick.	ed around pad.		
CHECKED BY: JDJ/TRM DATE CHECKED: 1/28/14; 5/12/	14		PREPARED BY: RMS

Golder Associates	FLUSH-MO	DUNT MONITOF	RING WELL CONSTRUC	CTION LOG	MW-43
ROJECT NAME: Ex	ide Frisco		PROJECT NUMBER:	130-2086	···
ITE NAME: Former		ing Facility	LOCATION: Frisco	o, Texas	
LIENT: Exide Tech	nologies		SURFACE ELEVATION	v: 646.10 FT A	MSL
EOLOGIST: JSX		NORTHING: 710		EASTING: 24807	
RILLER: Dan Spat	<del></del>	STATIC WATER I	EVEL: 14.93 FT BTOC	COMPLETION DA	TE: 1/14/2014
RILLING COMPANY	: SCI		DRILLING METHODS:	HSA	
LOCKING CAP: (ES	/ NO)	STEEL FLUSH MOU	ONCONCRETE CEAL PERSON	.):	AMSL AMSL 2.0 8.25 2.0*
			— CONCRETE SEAL DEPTH (ft. I	JLAR SEAL:	N/A
	1000		<ul><li>TOP OF BENTONITE SEAL DE</li><li>TYPE AND AMOUNT OF BENT</li></ul>	-: III (ic. 580)	2.0 t chips (N/A)
		_			7.0
			TOP OF SAND PACK DEPTH (		N/A
•			CENTRALIZER (yes (no)) - T	***	10.0
			TOP OF SCREEN DEPTH (ft. b	3-/-	
			TYPE OF SCREEN:SC	_	
			SCREEN SLOT SIZE (in.):		010
			SIZE OF SAND PACK:		0/40
			AMOUNT OF SAND:		N/A
			— BOTTOM OF SCREEN DEPTH	(ft. bgs):2	0.0
TOTAL DEDTIL			— BOTTOM OF WELL DEPTH (ft.	bgs):2	0.0
TOTAL DEPTH OF BOREHOLE (ft. bgs): 20	.0		BOTTOM OF FILTER PACK (ft. TYPE AND AMOUNT OF BACK	-3-/-	0.0 N/A

Golder Associates		ROUND MONITOR	RING WELL CONSTI			
PROJECT NAME: Ex		<b>—</b> 1174	PROJECT NUMBER:			
SITE NAME: Former		ing Facility	LOCATION: Frisco, Texas			
CLIENT: Exide Tech	inologies			on: 637.80 FT AMSL		
GEOLOGIST: RMS				EASTING: 2480549.86 FT		
DRILLER: Dan Spau		STATIC WATER LEV	VEL: 9.21 FT BTOC   COMPLETION DATE: 01/14/2014			
DRILLING COMPANY	: 801		DRILLING METHODS	S: HSA		
STICK UP: 3.5 FT		PI With the second of the seco	PP OF CASING ELEVATION: PROTECTIVE CASING (PS) EA GRAVEL OR SAND NONE EEP HOLE ROUND SURFACE ELEVATIO  AMETER OF RISER PIPE (in.) AMETER OF BOREHOLE (in.)  DNCRETE SEAL DEPTH (ft. bg) PE AND AMOUNT OF ANNUI	e 634.33 FT AMSL  2.0 8.25 gs): 2.0*		
		TY)  TO  CE  TO  TYI  SC  SIZ  AM	P OF SAND PACK DEPTH (ft NTRALIZER ( yes /何) - TY P OF SCREEN DEPTH (ft. bg	DNITE SEAL: Bent chips (50 lbs)  3.0  PE: N/A  s): 5.0  H 40 PVS slotted  0.010  20/40  325 lbs		
TOTAL DEPTH OF BOREHOLE (ft. bgs): 15.0	)	во	TTOM OF WELL DEPTH (ft. b TTOM OF FILTER PACK (ft. b PE AND AMOUNT OF BACKF	ogs):		
ADDITIONAL NOTES: <u>Th</u> Static water level collected * Driller indicates concrete	01/21/2014.	around pad.				
CHECKED BY:	JDJ/TRM					

RMS

PREPARED BY: \_\_\_

DATE CHECKED: 1/28/14; 5/12/14

Golder Associates	ABOVE G	ROUND MONITOR	ING WELL CONSTI	RUCTION LOGMW-45
PROJECT NAME: Ex	ide Frisco		PROJECT NUMBER:	130-2086
SITE NAME: Former		inα Facility	LOCATION: Frisco,	
CLIENT: Exide Tech				DN: 661.42 FT AMSL
GEOLOGIST: RMS		NORTHING: 710391		EASTING: 2480303.20 FT
DRILLER: Dan Spau	ıst			COMPLETION DATE: 01/14/2014
DRILLING COMPANY		011110101111111111111111111111111111111	DRILLING METHODS	- Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Taranta - Tara
LOCK UP: 3.5 FT	K O	PE PE PE PE PE PE PE PE PE PE PE PE PE P	P OF CASING ELEVATION: PROTECTIVE CASING (ves) A GRAVEL OR SAND NON EP HOLE DUND SURFACE ELEVATIO  METER OF RISER PIPE (in.) METER OF BOREHOLE (in.)	660.86 FT AMSL  no): Steel  ne  657.90 FT AMSL  2.0  8.25
		тор	PE AND AMOUNT OF ANNUL P OF BENTONITE SEAL DEF PE AND AMOUNT OF BENTO	
			P OF SAND PACK DEPTH (ft.	7.0
			ITRALIZER (yes /no)) - TY	. 590).
			OF SCREEN DEPTH (ft. bg	400
			E OF SCREEN: SC	0.040
; (			REEN SLOT SIZE (in.):	00/40
}			E OF SAND PACK:	050 !!
		AMC	DUNT OF SAND:	350 lbs
l		——— ВОТ	TOM OF SCREEN DEPTH (	ft. bgs): 20.0
i.		— вот	TOM OF WELL DEPTH (ft. b	ogs):20.0
TOTAL DEPTH OF BOREHOLE		DOT	TO: 1 OF E!! TED DAOW (6.1	ogs): 20.0
(ft. bgs): 20.0	) <b>****</b>		TOM OF FILTER PACK (ft. b E AND AMOUNT OF BACKF	9-7-
ADDITIONAL NOTES: The Static water level collected * Driller indicates concrete	nree bollards installed d 01/21/2014.		E AND AWIOUNT OF BACK	ILL: 1971
	<u>JDJ/TRM</u> /28/14; 5/12/14	<u>4</u>	F	PREPARED BY: RMS

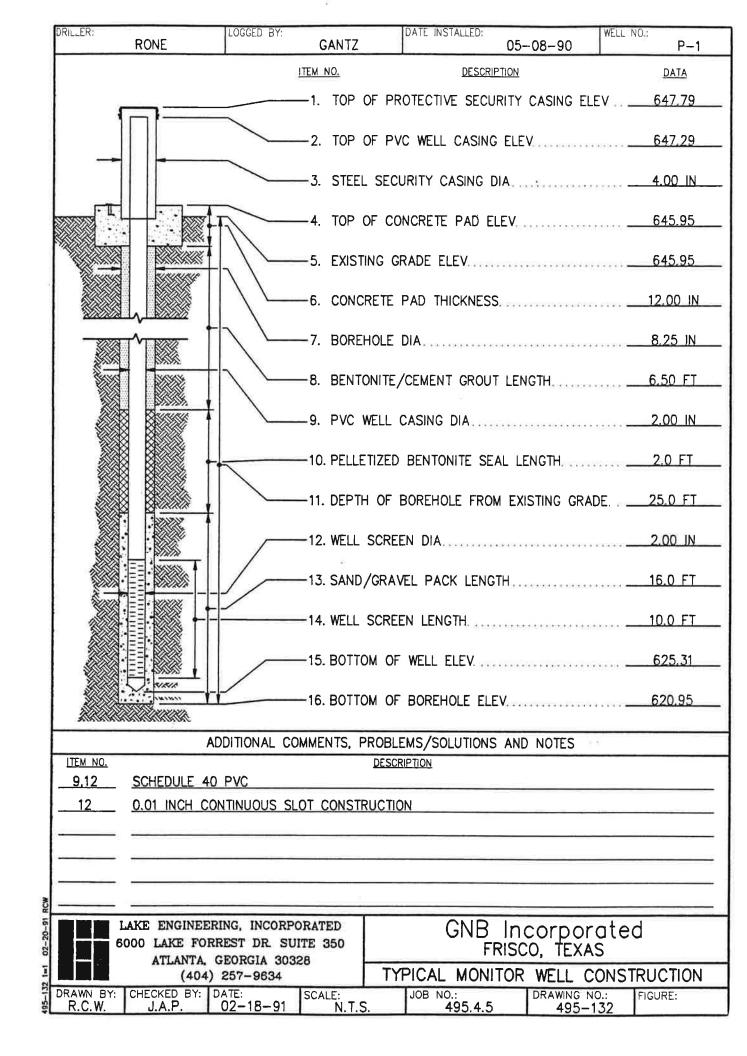
Golder FLUSH-MC	OUNT MONITORING WELL CONSTRU	CTION LOG MW-46			
PROJECT NAME: Exide Frisco	PROJECT NUMBER:	130-2086			
SITE NAME: Former Exide Recycl					
CLIENT: Exide Technologies		SURFACE ELEVATION: 631.41 FT AMSL			
GEOLOGIST: RMS		EASTING: 2479833.56 FT			
DRILLER: Dan Spaust	STATIC WATER LEVEL: 5.21 FT BTOC				
DRILLING COMPANY: SCI	DRILLING METHODS				
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	STEEL FLUSH MOUNT WELL PROTECTER  GROUND SURFACE ELEVAT	TION: 631.38 FT AMSL			
LOCKING CAP: (YES) / NO)	TOP OF CASING ELEVATION  DIAMETER OF RISER PIPE (i	in.): 2.0			
	DIAMETER OF BOREHOLE (i				
	or and the bottle for				
	CONCRETE SEAL DEPTH (ft.	bgs): 2.0*			
	TYPE AND AMOUNT OF ANN	IULAR SEAL: N/A			
	TOP OF BENTONITE SEAL D  TYPE AND AMOUNT OF BEN	TONITE SEAL: Bent chips (100 lbs)			
FED - 1783	TOP OF SAND PACK DEPTH	(ft. bgs):7.0			
	CENTRALIZER (yes /(no)) - 1	TYPE: N/A			
	TOP OF SCREEN DEPTH (ft.				
	TYPE OF SCREEN:S	SCH 40 PVC slotted			
	SCREEN SLOT SIZE (in.):	0.040			
	SIZE OF SAND PACK:	00//0			
	AMOUNT OF SAND:				
	BOTTOM OF SCREEN DEPTH				
TOTAL DEPTH	BOTTOM OF WELL DEPTH (ft	. bgs): 20.0			
OF BOREHOLE 20.0	BOTTOM OF FILTER PACK (fit TYPE AND AMOUNT OF BACK	t. bgs): 20.0  KFILL: N/A			
ADDITIONAL NOTES: Static water le  * Driller indicates concrete is :  CHECKED BY: JDJ/TRM_ DATE CHECKED: 1/28/14; 5/12/1	vel collected 01/21/2014. 2 feet thick.	PREPARED BY: RMS			

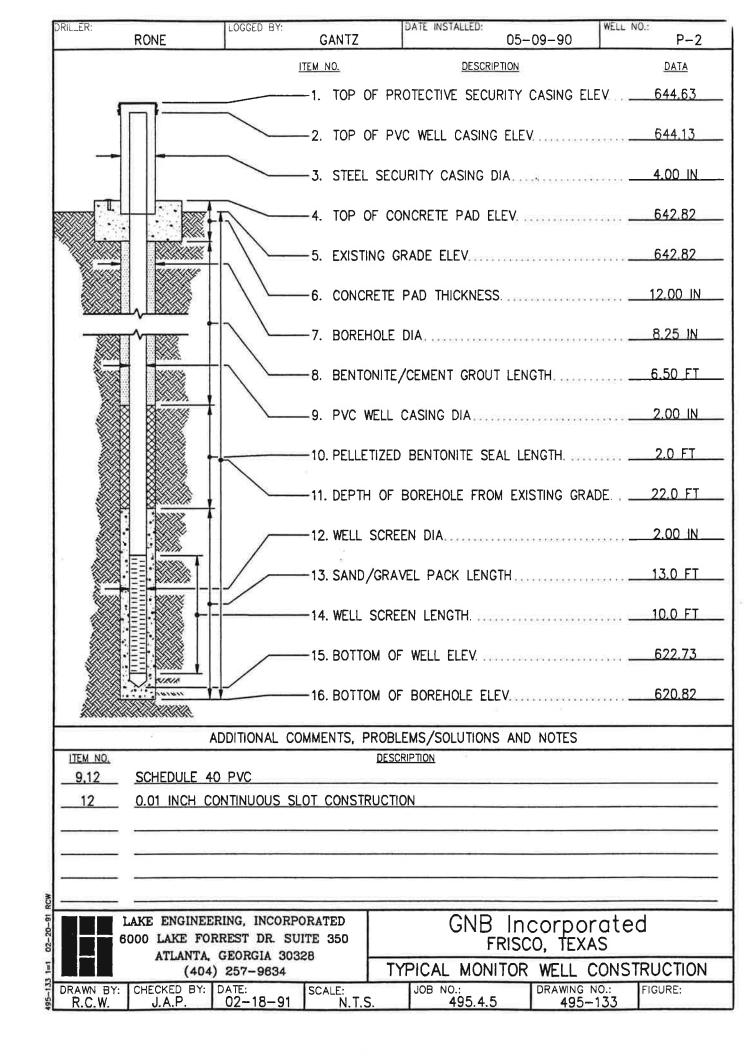


### ABOVE GROUND WELL CONSTRUCTION LOG

MW-47

Associates	ABOVE GI	NOOND WELL OOK	io i noo non Loa	
PROJECT NAME: CL	2LF Groundw	ater Monitoring	PROJECT NUMBER:	130-2086-01
SITE NAME: Exide R		Ü	LOCATION: Frisco,	TX
CLIENT: Exide Tech	nologies		SURFACE ELEVATION	N: 635.65 FT AMSL
GEOLOGIST: A. Marl	ow	NORTHING: 710277		EASTING: 2480302 FT
DRILLER: Gus Alejai			EL: 5.78 FT BTOC	COMPLETION DATE: 05-02-17
DRILLING COMPANY:	West Drilling		DRILLING METHODS	S: Hollow Stem Auger / CME 75
STICK UP: ~3.0 ft		CAP  TOP  PI  WEE  GRO  DIAN  DIAN	OF CASING ELEVATION:	638.28 FT AMSL  no): Steel  635.65 FT AMSL  2 ID (PVC) 4  gs): 1
TOTAL DEPTH OF BOREHOLE (ft. bgs):  ADDITIONAL NOTES: All casing	MSL - Above Mean S	TYP  TOP  CEN  TOP  TYP  SCR SIZE  AMC  BOT  BOT  TYP	P OF SAND PACK DEPTH (filtralizer ( yes /no) - TYP OF SCREEN DEPTH (ft. bg) E OF SCREEN: PVC EEN SLOT SIZE (in.): 0.0 E OF SAND PACK: 16/30 DUNT OF SAND: 3.5 bag TOM OF SCREEN DEPTH (ft. bg) TOM OF WELL DEPTH (ft. bg) TOM OF FILTER PACK (ft. bg) E AND AMOUNT OF BACKE	DNITE SEAL: Bentonite Chips  t. bgs): 5.5  PE: NA  gs): 7.5  Sch. 40  010  0  gs  (ft. bgs): 15  bgs): 15  bgs): 15
CHECKED BY: TJG	/AMF			
DATE CHECKED. 05				PREPARED BY: EPW





						_	T		T -	
Frisco Recycling Center Completic							2/26/2013	Drilling Method:	HSA	
Frisco TX						ompany:	Strata Core Services, LLC	Borehole Diameter (in.)		
Driller:						iconoc	Dan Spaust	Total Depth (ft):	20	
					Driller's License: 3038M Northing: 7103664.0 Logged By: Roberta Russell Easting: 2480920.3					
PBW Project No. 1755  Logged By: Roberta Russell Easting: Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMS										
Field Sup						Method:	5' Split Spoon	TOC Elev. (ft AMSL):	681.79	
epth (ft)	Well Materials	Recovery (ft/ft)	USCS	Samp			Lithol Descri	ogic		
0		, ,	/////	0-0.5	5 (0 - 3	3.0) CLAY	with trace gravel, dark reddis	-	rm, low to med	
_	$\boxtimes \boxtimes$				plas		ndant calcareous nodules.	, ,	,	
			(ct//	0.5-2	2					
=		26/50			$\dashv$					
-		3.6/5.0		2-4	(0.5	10.0% 5:	OII T/0''' O' A''	1011	,	
				_ :	(3.0	(3.0 - 13.0) Clayey SILT/Silty CLAY, dark reddish brown, yellowish brown slightly moist, very hard, low plasticity, friable from 5-6.5'.				
1 1:   1			4-5		slightly moist, very hard, low plasticity, mable from 5-0.5.					
5 -				4-5						
=		3.1/5.0 <b>CL/ML</b>		1						
_				1						
-			CL/ML							
_										
				1						
10 –										
-				3						
-		3.4/5.0								
=		0.4/0.0		1	(12.0	0 140) C	Clayey SAND/Sandy CLAY, lig	ht vallowich brown with a	rongo etaining	
	:: <u> </u>  ::		SC/CL	1			noist, soft, low plasticity.	in yellowish brown with o	nange staining	
_	l H. H.				(14.0	0 - 19.0) S	SHALE, dark gray with orange			
15 —					bedo	ding plane	s), dry to slightly moist, soft to	firm, high plasticity, wea	thered.	
_										
-			SH	1						
		4.5/5.0		1						
_				1						
=	900000000			-	(10)	0 - 20 0) 9	SHALE, dark gray, dry, very ha	ard		
20 –					(13.0	20.0)	min Le, dank gray, dry, very lie	iiu.		



Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664 Tel (512) 671-3434 Fax (512) 671-3446

This log should not to be used separately from the report to which it is attached.

Annular Materials

Annular waterials (0.0 - 0.5) Concrete (0.5 - 1.0) Bentonite Grout (1.0 - 2.5) Bentonite Hole Plug (2.5 -19.0) 20/40 Silica Sand (19.0 - 20.0) Sloughed Material

Well Materials

(+3.34 - 4.0) Casing, 2" Sch 40 FJT PVC (4.0 - 19.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

	Exide	Techn	ologi	es		Log of Bori	ng: PMW-20	R
Frisco Recycling Center Frisco, TX					completion Date:  Prilling Company:  Priller:	2/26/2013 Strata Core Services, LLC Chris Combs 56033	Drilling Method: Borehole Diameter (in.): Total Depth (ft):	25
PBW Project No. 1755					oriller's License: ogged By: ield Supervisor: ampling Method:	Roberta Russell Tim Jennings, P.G. 5' Split Spoon	Northing:  Easting:  Ground Elev. (ft AMSL):  TOC Elev. (ft AMSL):	7103357.9244 2480030.2079 645.2 648.09
Depth (ft)	Well Materials	Recovery (ft/ft)	USCS	Sample	е	Lithol Descri	ogic	
0 -		5.0/5.0	CH	0-0.5 0.5-2		, dark reddish brown, moist, s	oft, high plasticity.	ow planticity
5 - -			ML	4-5		yey SIL1, dark reddish blown, rate calcareous nodules.	ary to moist, very hard, i	ow plasticity,
- - 10 —		2.7/5.0	SCICL			andy CLAY/Clayey SAND, moi undant calcareous nodules.	st, soft to firm, low plastic	ity, more clay
- - -		5.0/5.0				CLAY, reddish yellow, with trac city, very fine to medium grave		sist, firm, low to
15 — - - -		5.0/5.0	CL		(40.5- 20.0) (	NDAVEL with along raddish val	law wat van oot 20.2	00/ play matrix
20 -		5.0/5.0	CL GC GC		(20.0 - 21.8) C plasticity clay,  (21.8 - 23.0) C plasticity clay  (23.0 - 23.5) C plasticity clay,	GRAVEL with clay; reddish yellocary with gravel; reddish yellocary with gravel; reddish yellocary carbonate gravel in clay GRAVEL with clay; reddish yellocary with gravely with gravely with gravely with gravely with gravely with gravely with gravel	low, wet, soft to firm, low to blow, wet, soft, 30-40% low el. bw, very moist, hard, low to	o medium v to medium o medium
Pas 220	Pastor, Behling & Wheeler, LLC 2201 Double Creek Dr., Suite 4004 Round Rock, TX 78664  Annular (0.0 - 2.) (2.0 - 7.)					well Materials (+2.89 - 10.0) Casir (10.0 - 25.0) Screen	rt to which it is attached.  ng, 2* Sch 40 FJT PVC n, 2* Sch 40 FJT PVC,	

### Log of Boring: VCP-MW-1 **Exide Technologies** Completion Date: 2/28/2013 **Drilling Method:** HSA **Undeveloped Buffer Property Drilling Company:** Borehole Diameter (in.): 7.75 Sunbelt Environmental Frisco, TX Driller: Chris Combs Total Depth (ft): 10 Driller's License: 56033 Northing: 7101502.004 Tim Jennings, P.G. 2479866.95 Logged By: Easting: PBW Project No. 1824 Ground Elev. (ft AMSL): 652.99 Field Supervisor: Tim Jennings, P.G. Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 655.88 Depth Recovery (ft/ft) Well Lithologic PID **USCS** Description (ft) Materials (ppm) 0 (0 - 3.6) Clayey SILT, grayish brown, moist to wet, soft to firm, high plasticity. 0.9 1.2 MH 5.0/5.0 1.2 3 0.7 (3.6 - 7.5) SHALE, light brown, orange and gray, moist, firm to hard, medium plasticity, weathered. 0.5 5 1.3 6 1.1 SH 5.0/5.0 1.3 (7.5 - 10.0) SHALE, dark gray, dry, hard. 8 0.9 9 8.0

# **PBW**

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This log should not be used separately from the report to which it is attached.

Annular Materials

(0.0 - 1.0) Concrete (1.0 - 2.0) Bentonite Hole Plug (2.0 - 10.0) 20/40 Silica Sand Well Materials

(+2.89 - 2.5) Casing, 2" Sch 40 FJT PVC (2.5 - 10.0) Screen, 2" Sch 40 FJT PVC,

#### Log of Boring: VCP-MW-2 **Exide Technologies** Completion Date: 3/1/2013 Drilling Method: **HSA Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 7.75 Frisco, TX Driller: Chris Combs Total Depth (ft): 20 56033 Driller's License: Northing: 7101872.478 Logged By: Tim Jennings, P.G. Easting: 2479265.912 PBW Project No. 1824 Tim Jennings, P.G. Ground Elev. (ft AMSL): 627.74 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 631.16 Recovery (ff/ft) Depth Well Lithologic PID **USCS** (ft) Materials (ppm) Description (0 - 4.0) Clayey SILT, dark grayish brown, moist, soft to firm, high plasticity, 0 6.2 abundant roots to 4'. 1 7.0 2 MH 5.0/5.0 9.3 3 8.7 (4.0 - 9.0) Silty CLAY, dark grayish brown, moist, soft, medium plasticity, rust colored 7.2 mottling locally, friable, abundant roots, iron oxide mottling below 6'. 5 8.8 6 CL 7.2 5.0/5.0 8.1 8 8.1 9 (9.0 - 11.1) Silty CLAY, dark grayish brown, moist, firm, medium to high plasticity, 9.3 light gray laminae. 10 CL/CH 8.5 11 (11.1 - 13.6) Gravelly CLAY, light brown and orange, moist to wet, firm, high 7.0 plasticity clay, ~20-30% fine to medium gravel in clay matrix, increasing moisture 12 with depth. 5.0/5.0 6.6 13 CH 3.2 (13.6 - 15.6) Silty CLAY, light brown to orange, wet, soft, high plasticity, <5% fine to 14 coarse sand. 7.2 15 8.1 (15.6 - 18.2) SHALE, gray to light brown, moist, hard, abundant iron oxide along 16 bedding planes, weathered. 5.4 17 3.5/5.0 5.2 18 (18.2 - 20.0) SHALE, dark gray, dry, hard. 12.0 19 25.1

# **PBW**

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 20.0) 20/40 Silica Sand Well Materials

(+3.42 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC,

#### Log of Boring: VCP-MW-3 **Exide Technologies** Completion Date: 2/28/2013 **Drilling Method: HSA** Undeveloped Buffer Property **Drilling Company:** Borehole Diameter (in.): 7.75 Sunbelt Environmental Frisco, TX Driller: Chris Combs Total Depth (ft): 15 56033 Northing: Driller's License: 7102743.49 Tim Jennings, P.G. 2478984.765 Logged By: Easting: PBW Project No. 1824 Tim Jennings, P.G. Ground Elev. (ft AMSL): 631.34 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 634.06 Recovery (ft/ft) Depth Well Lithologic PID **USCS** (ft) Materials Description (ppm) (0 - 3.4) Silty CLAY/Clayey SILT, dark grayish brown, moist, soft to firm, high 0 plasticity, abundant roots at 0-0.5'. 8..0 1 0.1 CH/MH 2 4.3/5.0 0.5 3 0.3 (3.4 - 7.3) Silty gravelly CLAY; light brown, moist, firm to hard, medium plasticity clay, ~10-30% fine calcareous gravel. 4 1.1 5 0.6 6 0.6 7 0.1 (7.3 - 7.6) Silty CLAY, light brown, moist firm to hard, medium plasticity, orange and 2.4/5.0 green laminated. 8 (7.6 - 10.0) No recovery, CLAY as above, inferred based on field geologist's observations 9 10 (10.0 - 13.0) Silty CLAY, light brown, wet, soft, high plasticity. 0.4 11 CH 0.5 12 5.0/5.0 0.4 13 (13.0 - 15.0) SHALE, gray, moist, firm to hard, medium plasticity, abundant iron oxide partings, weathered. 1.1 SH 14 0.4

# **PBW**

15

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Annular Materials (0.0 - 2.0) Concrete (2.0 - 4.0) Bentonite Hole Plug (4.0 - 15.0) 20/40 Silica Sand Well Materials

(+2.72 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-4 **Exide Technologies** Completion Date: 2/28/2013 Drilling Method: **HSA Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 7.75 Frisco, TX Driller: Chris Combs Total Depth (ft): 15 56033 Driller's License: Northing: 7102521.052 Tim Jennings, P.G. Logged By: Easting: 2479285.077 PBW Project No. 1824 632.18 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 635.43 Recovery (ff/ft) Depth Well Lithologic PID **USCS** (ft) Materials (ppm) Description (0 - 1.8) Clayey SILT, dark grayish brown, moist, soft, high plasticity, trace 0 0 calcareous nodules. .MH. 1 0 (1.8 - 5.3) Silty CLAY, brown to light brown, moist, soft to firm, medium to high 2 plasticity, trace to 5% calcareous nodules. 2.5/5.0 0.4 3 CL/CH 4 5 (5.3 - 6.6) Gravelly CLAY/Clayey GRAVEL, sub-rounded gravel, moist, soft to firm, 0 0.1 medium plasticity clay, ~40-60% fine to medium gravel in clay matrix. CTICC 6 0 (6.6 - 10.7) Silty CLAY, orange, brown and gray mottled, moist, firm, medium to high 7 plasticity. 3.0/5.0 0.1 8 CL/CH 9 10 1 (10.7 - 15.0) SHALE, orangish brown to gray, moist to dry, firm to hard, medium 11 plasticity, abundant iron oxide along bedding planes. 0 12 5.0/5.0 0.1 SH 13 0.3 14 0.1 15

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Annular Materials

(0.0 - 1.0) Concrete (1.0 - 3.0) Bentonite Hole Plug (3.0 - 15.0) 20/40 Silica Sand Well Materials

(+3.25 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 15.0) Screen, 2" Sch 40 FJT PVC, 0.010 slot

#### Log of Boring: VCP-MW-5 **Exide Technologies** Completion Date: 2/27/2013 **Drilling Method: HSA Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 7.75 Frisco, TX Driller: Chris Combs Total Depth (ft): 20 56033 Driller's License: Northing: 7102925.899 Logged By: Tim Jennings, P.G. Easting: 2480000.561 PBW Project No. 1824 Ground Elev. (ft AMSL): 640.8 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 643.97 Depth Well Lithologic PID (fff) **USCS** Description (ft) Materials (ppm) (0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, firm to hard, high plasticity, few 0 (<5%) small calcareous nodules below 3.3', dry below 3.5'. 1 2 5.0/5.0 3 CH 5 6 (6.6 - 11.5) Sandy, silty CLAY; light brown, light gray and orange laminated, moist, very hard, medium to high plasticity, ~10-20% fine to coarse sand in clay matrix. 2.5/5.0 8 9 CL/CH 10 11 CH. (11.5 - 12.0) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay. 12 (12.0 - 12.8) Clayey, gravelly SAND; wet, soft, ~20-30% clay, ~10-20% fine to SW 3.2/5.0 medium gravel. 13 (12.8 - 15.9) Sandy, gravelly CLAY; brown orange, moist, firm, high plasticity clay, ~10-20% fine sand and fine gravel, possibly calcareous nodules. 14 CH 15 16 (15.9 - 17.5) CLAY, orange and gray mottled, moist, firm, medium plasticity, <5% fine to medium gravel and calcareous nodules, possible reworked shale. 17 2.5/5.0 (17.5 - 17.7) SHALE, gray, moist, firm, high plasticity. 18 (17.7 - 20.0) SHALE, gray, very hard, poor recovery. SH 19

# **PBW**

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### Notes

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Annular Materials

(0.0 - 1.0) Concrete (1.0 - 3.0) Bentonite Hole Plug (3.0 - 20.0) 20/40 Silica Sand Well Materials

(+3.17 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC,

#### Log of Boring: VCP-MW-6 **Exide Technologies** Completion Date: 2/27/2013 Drilling Method: HSA **Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 7.75 Frisco, TX Driller: Chris Combs Total Depth (ft): 20 56033 Driller's License: Northing: 7103251.552 Logged By: Tim Jennings, P.G. Easting: 2479837.08 PBW Project No. 1824 Tim Jennings, P.G. Ground Elev. (ft AMSL): 641.1 Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 644.71 Depth Lithologic Well PID (fff) **USCS** (ft) Materials (ppm) Description (0 - 6.6) Silty CLAY, dark grayish brown, moist to dry, soft to hard, high plasticity, 0 <5% calcareous nodules, hard and dry below 3.7', brown, ~5-10% calcareous 1 nodules at 5-6.6', very stiff 6-6.6'. 2 5.0/5.0 3 CH 5 6 (6.6 - 10.0) Silty, gravelly CLAY; brown orange, moist, hard to very hard, medium to high plasticity clay, well laminated, ~10-20% fine to medium gravel and calcareous 3.7/5.0 nodules. 8 CL/CH 9 10 (10.0 - 15.0) Clayey SILT, moist to wet, soft, high plasticity, ~20-30% fine to medium gravel and fine to coarse sand from 12.3'. 11 12 3.7/5.0 MH 13 14 15 (15.0 - 16.5) Silty, gravelly SAND; brown, wet, soft, ~10% fines, ~20-30% fine to medium sub-rounded gravel in fine to coarse sand. SM/SW 16 (16.5 - 17.1) Silty CLAY, brown, wet, soft, high plasticity, trace fine gravel in clay CH/ 17 5.0/5.0 (17.1 - 20.0) SHALE, gray and brown, moist, firm to hard, iron oxide staining along bedding planes, weathered. 18 SH 19 20

# **PBW**

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### Notes:

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Annular Materials (0.0 - 1.0) Concrete

(1.0 - 3.0) Bentonite Hole Plug (3.0 - 20.0) 20/40 Silica Sand Well Materials

(+3.61 - 5.0) Casing, 2" Sch 40 FJT PVC (5.0 - 20.0) Screen, 2" Sch 40 FJT PVC,

### Log of Boring: VCP-MW-7 **Exide Technologies** Completion Date: 4/18/2013 **Drilling Method:** HSA **Undeveloped Buffer Property Drilling Company:** Borehole Diameter (in.): 8.25 Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 10 58780 Driller's License: 7100967.046 Northing: Carolyn Sexton 2481078.613 Logged By: Easting: PBW Project No. 1824 683.116976 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL): Sampling Method: TOC Elev. (ft AMSL): 5' Split Spoon 685.176513 Depth Recovery (ft/ft) Well Lithologic PID **USCS** Description (ft) Materials (ppm) 0 (0 - 0.8) Silty CLAY, dark gray brown, moist, soft, low plasticity, trace med. size gravel in top 0.5', gradational contact. FILL 0 (0.8 - 1.1) Chalky, silty LIMESTONE, weathered, orange iron oxide staining. (1.1 - 6.2) Chalky, silty LIMESTONE, light tan, brittle, dry, hard, <5% dark brown and orange ironstone nodules from 4.0-4.2'. 0 2 4.0/4.0 0 3 4 0 5 0 6 (6.2 - 10) Chalky, silty LIMESTONE, dark gray, fissile, blocky at base, dry, hard. 5.0/5.0 0 7 0 8 SH 0 1.0/1.0 0

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Annular Materials

(0.0 - 1.0) Concrete (1.0 - 2.0) Bentonite Hole Plug

(2.0 - 10.0) Industrial Quartz Sand

(+2.06 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 10.0) Screen, 2" Sch 40 PVC,

0.010 slot

#### Log of Boring: VCP-MW-8 **Exide Technologies** Completion Date: 4/17/2013 **Drilling Method: HSA Undeveloped Buffer Property** Borehole Diameter (in.): 8.25 **Drilling Company:** Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 16 58781 Driller's License: Northing: 7102884.374 Logged By: Carolyn Sexton Easting: 2481077.573 PBW Project No. 1824 648.101225 Tim Jennings, P.G. Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 651.023133 Depth Recovery (ft/ft) Well Lithologic PID **USCS** Description (ft) Materials (ppm) (0 - 3.6) FILL, gray brown, dry, with silty clay, coarse sand to large gravel, 0 0 asphalt-like nodules, calcareous nodules. 0 2 ÐЮ 3 0 (3.6 - 7.4) Silty CLAY, dark brown, moist, low plasticity, ~10% graded angular fine to med. sand and calcareous nodules. 0 5 0 0 0 (7.4 - 11.1) Silty CLAY, medium-brown to gray, moist to wet, low to med. plasticity, ~10-20% coarse sand to medium gravel. 8 0 9 0 10 0 11 (11.1 - 15.9) Slightly silty CLAY, gray brown, moist to wet, low to med. plasticity, 0 ~30-40% gravel from 11.1-11.3'. 12 0 13 0 14 0 15 0 (15.9 - 16) LIMESTONE, grayish tan, high toughness, competent, microcrystaline to very fine grained, contains veins of secondary calcite crystals.

# **PBW**

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### Notes

This log should not be used separately from the report to which it is attached.

Annular Materials (0.0 - 2.0) Concrete

(2.0 - 4.0) Bentonite Hole Plug (4.0 - 16.0) Industrial Quartz Sand Well Materials

(+2.92 - 6.0) Casing, 2" Sch 40 PVC (6.0 - 16.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-9 **Exide Technologies** Completion Date: 4/17/2013 **Drilling Method:** HSA **Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 8.25 Frisco, TX Driller: Joe Garcia Total Depth (ft): 20 58782 Driller's License: Northing: 7103297.519 Logged By: Carolyn Sexton Easting: 2481042.415 PBW Project No. 1824 Ground Elev. (ft AMSL): 664.314339 Tim Jennings, P.G. Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 666.957891 Recovery (ff/ft) Depth Well Lithologic PID **USCS** Description (ft) Materials (ppm) (0 - 0.7) Silty CLAY, dark brown, slighly moist, firm, low plasticity, with root fragments 0 0 and angular coarse sand to med. gravel. (0.7 - 2.7) Silty CLAY, dark brown to black, slightly moist, firm to hard, low plasticity, with calcareous nodules and 10-20% angular coarse sand to fine gravel. 0 2 4.0/5.0 0 (2.7 - 5) Gravelly CLAY, yellow-brown, moist to wet, firm, low plasticity, ~40-50% fine 3 CL to med. carbonate gravel in clay matrix. 0 0 5 (5 - 6.1) Silty CLAY, gray with orange iron oxide staining, moist, soft to firm, low to 0 medium plasticity, calcareous nodule lense from 5.5-5.6', laminated fine sand from 6 5.9-6.05 (6.1 - 18.8) SHALE, gray with orange iron oxide staining, moist, firm, low plasticity, 0 moderately weathered throughout, contains horizontal silt and sand laminae and vertical iron oxide filled fractures, weathered. 5.0/5.0 0 8 0 9 0 10 0 0 12 5.0/5.0 0 13 SH 0 14 0 15 0 16 0 17 5.0/5.0 0 18 0 19 (18.8 - 20) SHALE, dark gray, moist, firm, low plasticity, unweathered. 0

# **PBW**

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Annular Materials (0.0 - 0.5) Concrete

(0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 20.0) Industrial Quartz Sand Well Materials

(+2.64 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 20.0) Screen, 2" Sch 40 PVC,

#### Log of Boring: VCP-MW-10 **Exide Technologies** Completion Date: 4/17/2013 **Drilling Method: HSA Undeveloped Buffer Property** Borehole Diameter (in.): 8.25 **Drilling Company:** Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 15 58783 Driller's License: Northing: 7103274.856 Logged By: Carolyn Sexton Easting: 2481265.991 PBW Project No. 1824 667.108585 Tim Jennings, P.G. Ground Elev. (ft AMSL) Field Supervisor: Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 669.744622 Depth Recovery (ft/ft) Well Lithologic PID **USCS** Description (ft) Materials (ppm) (0 - 0.4) Silty CLAY, dark brown, with roots and 5-10% fine gravel and calcareous 0 CL 0 nodules (0.4 - 1.2) FILL, light gray, interlayered soft clay and iron oxide stained sand, slightly FILL 1 moist, low to medium plasticity. (1.2 - 5.6) Silty CLAY, dark brown-gray, moist, low to medium plasticity, coarse 0 carbonate sand to fine gravel within clay matrix throughout, coarse gravel from 2 1.6-2.8'. 5.0/5.0 0 3 0 0 5 0 (5.6 - 12.4) SHALE, light to medium gray, moist, soft, friable and fissile, massive 6 below 7.7', limonite and iron oxide staining throughout, weathered. 0 5.0/5.0 0 8 0 9 0 10 0 11 0 12 5.0/5.0 0 (12.4 - 15) SHALE, dark gray, slightly moist, low plasticity, slightly weathered. 13 0 14 0 15

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Annular Materials

(0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 15.0) Industrial Quartz Sand Well Materials

(+2.64 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-11 **Exide Technologies** Completion Date: 4/17/2013 Drilling Method: **HSA Undeveloped Buffer Property Drilling Company:** Borehole Diameter (in.): 8.25 Sunbelt Environmental Frisco, TX Driller: Joe Garcia Total Depth (ft): 15 58784 7103365.27 Driller's License: Northing: 2481418.215 Logged By: Carolyn Sexton Easting: PBW Project No. 1824 670.152153 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL): Sampling Method: 5' Split Spoon TOC Elev. (ft AMSL): 672.734085 Depth Recovery (ff/ft) Well Lithologic PID **USCS** Description (ft) Materials (ppm) (0 - 0.8) Silty CLAY, deep brown, slightly moist, low plasticity, soft to firm, contains 0 0 (0.8 - 5) Slightly silty CLAY, yellow-gray, slightly dry, firm to hard, low plasticity, 1 10-30% coarse sand to fine gravel dispersed in clay matrix. 0 2 3.6/5.0 0 3 0 0 5 (5 - 10) SHALE, gray, slightly dry, firm to hard, low plasticity, iron oxide staining and carbonate filled laminae throughout, weathered. 0 6 0 3.4/5.0 0 8 0 9 0 10 SH (10 - 12.8) SHALE, dark gray, friable, iron oxide staining, weathered. 0 11 0 12 5.0/5.0 0 (12.8 - 15) SHALE, dark gray, dry, very hard, fissile, unweathered. 13 0 14 0 15

# **PBW**

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This log should not be used separately from the report to which it is attached.

Annular Materials

(0.0 - 0.5) Concrete (0.5 - 2.0) Bentonite Hole Plug (2.0 - 15.0) Industrial Quartz Sand Well Materials

(+2.58 - 2.5) Casing, 2" Sch 40 PVC (2.5 - 15.0) Screen, 2" Sch 40 PVC, 0.010 slot

#### Log of Boring: VCP-MW-12 **Exide Technologies** Completion Date: 12/12/2013 Drilling Method: **HSA Undeveloped Buffer Property Drilling Company:** Sunbelt Environmental Borehole Diameter (in.): 8 Frisco, TX Driller: Robert Flair Total Depth (ft): 30 2948 7103109 Driller's License: Northing: Tim Jennings P.G. 2481224.6 Logged By: Easting: PBW Project No. 1824 652.88 Field Supervisor: Tim Jennings, P.G. Ground Elev. (ft AMSL) Sampling Method: 5' Continuous Samples TOC Elev. (ft AMSL): 656.04 Depth Well Lithologic PID (fff) **USCS** Description (ft) Materials (ppm) (0 - 1.5) Sandy gravelly CLAY, dark brown, moist, soft, ~20% fine to coarse 0 0 limestone gravel (1.5 - 9.5) Gravelly CLAY, dark brown, moist, very firm-stiff, ~10-15% very fine to 2 fine gravel and carbonate nodules 3.0/5.0 0.5 0.5 CL 0.5 6 0.5 2.2/5.0 8 (9.5 - 13) CLAY, olive gray, moist, firm, medium to high plasticity, few fine carbonate 10 nodules 0.5 CL/CH 0.5 12 5.5/5.5 1.1 (13 - 25.5) SHALE, gray and orange banded, moist, friable, locally very clayey, 1.5 weathered 14 1.6 2.2 16 2.2 5.0/5.0 2.2 18 2.2 2.2 20 2.2 2.2 22 4.0/5.0 1.6 1.6 24 3.8 1.1 (25.5 - 27) SHALE, gray, moist to dry, locally friable, locally sandy, weathered 26 2.0/2.5 1.1 (27 - 30) SHALE, gray, dry, firm, friable, fissile 1.6 28 2.2 2.5/2.5 2.2 30

# **PBW**

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### Notes

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Annular Materials

(0.0 - 2.0) Concrete (2.0 - 8.0) Bentonite Hole Plug (8.0 - 30.0) Industrial Quartz Sand Well Materials

(+3.2 - 9.5) Casing, 2" Sch 40 PVC (9.5 - 29.5) Screen, 2" Sch 40 PVC,

#### Log of Boring: VCP-MW-13 **Exide Technologies** Completion Date: 1/3/2014 **HSA Drilling Method:** Undeveloped Buffer Property **Drilling Company:** Borehole Diameter (in.): 8 Sunbelt Environmental Frisco, TX Driller: Robert Flair Total Depth (ft): 24 Driller's License: 2948 Northing: 7103094 Tim Jennings, P.G. Logged By: Easting: 2481043.9 PBW Project No. 1824 Tim Jennings, P.G. 645.9 Ground Elev. (ft AMSL): Field Supervisor: Sampling Method: 3"x5' Continuous Split Barrel TOC Elev. (ft AMSL): 657.38 Recovery (#/ft) Depth Well Lithologic PID **USCS** (ft) Materials Description (ppm) CLAY, gravel and sand, brown, moist, soft (fill). 0 2 Sandy gravelly CLAY, dark brown, moist, ~10-15% very fine sand and fine carbonate nodules, very stiff. 4 CLAY and sandy clay, light brown-orange-gray, moist to wet, very firm to firm, laminated, abundant carbonate nodules from 5-10', gypsum precipitate on bedding 6 plane at 11', increasing moisture below 10' and locally wet below 15', very heavily weathered shale. 8 СŁ 10 12 14 16 18 SHALE, weathered, dark gray with orange weathering locally, thin gravel interbeds locally, moist to wet, soft to firm, friable. 20 SH 22

# **PBW**

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#### Notes

This log should not be used separately from the report to which it is attached.

Annular Materials

(0.0 - 2.0) Concrete (2.0 - 3.0) Bentonite Hole Plug (3.0 - 24.0) 16/30 Silica Sand

#### Well Materials

(+3.2 - 4.0) Casing, 2" Sch 40 FJT PVC (4.0 - 24.0) Screen, 2" Sch 40 FJT PVC, 0.01 slot

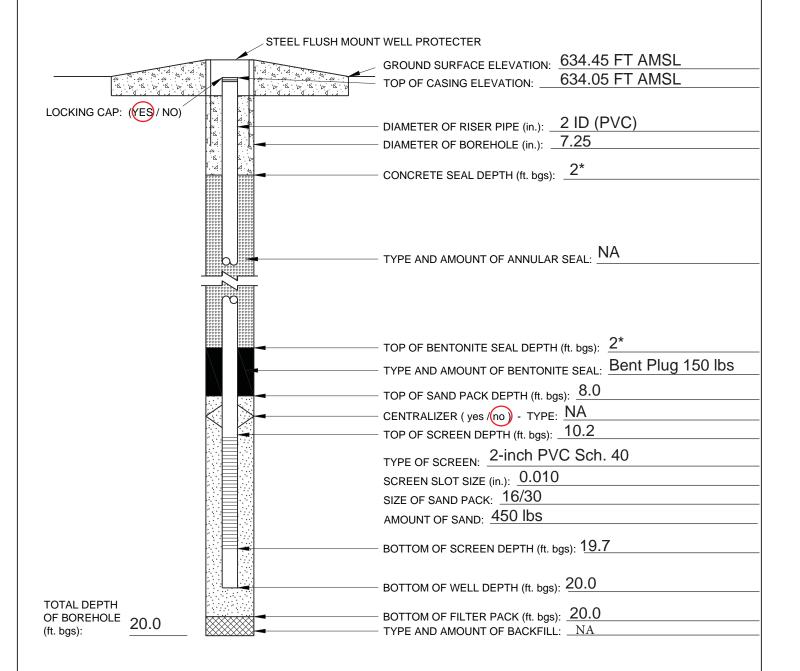


PROJECT NAME: Exide Deep GW PDI PROJECT NUMBER: 130-2086-06 SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 639.27 FT AMSL CLIENT: Exide Technologies NORTHING: 7101737.52 FT EASTING: 2480599.66 FT GEOLOGIST: B. Works STATIC WATER LEVEL: 10.91 FT BTOC | COMPLETION DATE: 05/15/2018 DRILLER: G Alejandr DRILLING COMPANY: WEST Drilling DRILLING METHODS: HSA TOP OF CASING ELEVATION: 638.97 FT AMSL PROTECTIVE CASING (yes) no): Steel STICK UP: 3.75 FT PEA GRAVEL OR SAND WEEP HOLE GROUND SURFACE ELEVATION: 635.52 FT AMSL DIAMETER OF RISER PIPE (in.): 2 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25 CONCRETE SEAL DEPTH (ft. bgs):  $2^*$ TYPE AND AMOUNT OF ANNULAR SEAL: NA TOP OF BENTONITE SEAL DEPTH (ft. bgs):  $2^*$ - TYPE AND AMOUNT OF BENTONITE SEAL: Bent. Plug 150 lbs - TOP OF SAND PACK DEPTH (ft. bgs): 8.0CENTRALIZER ( yes /no) - TYPE: NA TOP OF SCREEN DEPTH (ft. bgs): 10.2 TYPE OF SCREEN: PVC Sch. 40 SCREEN SLOT SIZE (in.): 0.010 SIZE OF SAND PACK: 16/30 AMOUNT OF SAND: 450 lb BOTTOM OF SCREEN DEPTH (ft. bgs): 29.7 BOTTOM OF WELL DEPTH (ft. bgs): 30.0 TOTAL DEPTH OF BOREHOLE 30.0 BOTTOM OF FILTER PACK (ft. bgs): 30.0 (ft. bgs): TYPE AND AMOUNT OF BACKFILL: NA ADDITIONAL NOTES: AMSL - Above Mean Sea Level;; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018. \* - Value indicated and confirmed by WEST Drilling on 05/23/2019. CHECKED BY: JS PREPARED BY: EPW DATE CHECKED: 06/01/2018



DGW-MW-2

PROJECT NAME: Exide Deep GW	PDI	PROJECT NUMBER:	130-2086-06
SITE NAME: Exide - Frisco		LOCATION: Frisc	co, TX
CLIENT: Exide Technologies		SURFACE ELEVATION	DN: 634.48 FT AMSL
GEOLOGIST: B. Works	NORTHING: 710167	76.31 FT	EASTING: 2480414.56 FT
DRILLER: G. Alejandro	STATIC WATER LEVI	EL: 6.30 FT BTOC	COMPLETION DATE: 05/15/2018
DRILLING COMPANY: WEST Drilling	na .	DRILLING METHODS	S. HSA



ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet;
bas - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018.

\* - Value indicated and confirmed by WEST Drilling on 05/23/2019.

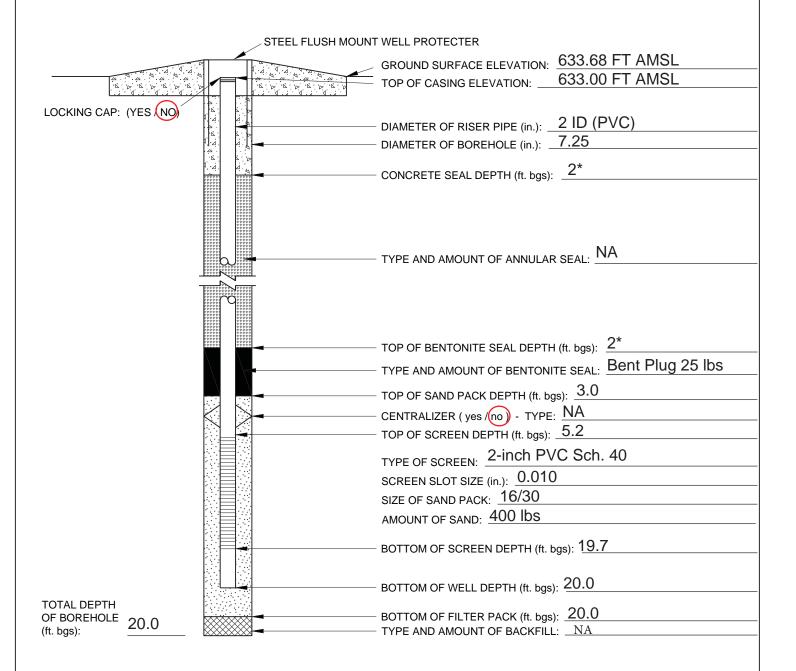
CHECKED BY: JS

DATE CHECKED: 06/01/2018



DGW-MW-3

PROJECT NAME: Exide Deep GW	PDI	PROJECT NUMBER:	130-2086-06
SITE NAME: Exide - Frisco		LOCATION: Frisc	co, TX
CLIENT: Exide Technologies		SURFACE ELEVATION	ON: 633.54 FT AMSL
GEOLOGIST: B. Works	NORTHING: 710169	94.14 FT	EASTING: 2480288.02 FT
DRILLER: G. Alejandro	STATIC WATER LEV	EL: 5.30 FT BTOC	COMPLETION DATE: 05/15/2018
DRILLING COMPANY: WEST Drilling	na	DRILLING METHODS	S: HSA



ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet;
bas - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018.

\* - Value indicated and confirmed by WEST Drilling on 05/23/2019.

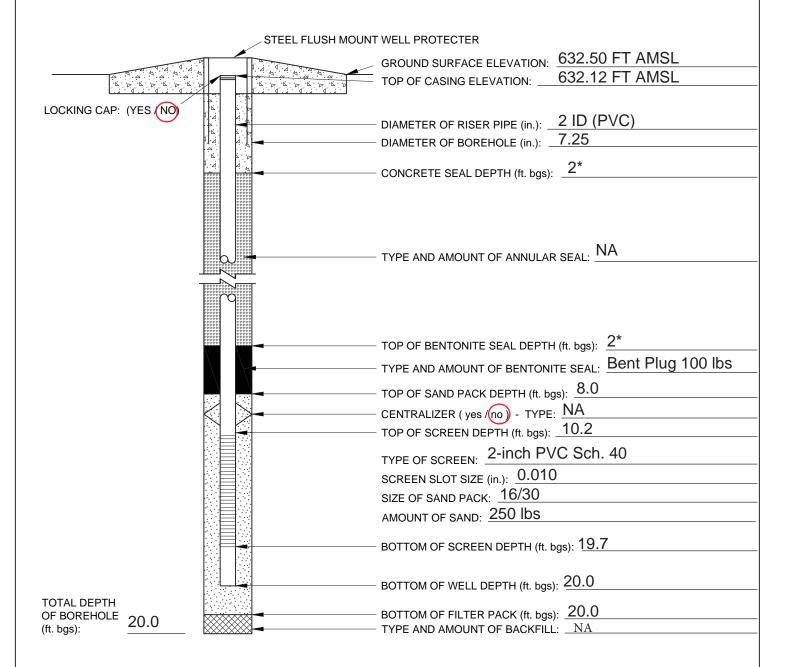
CHECKED BY: JS

DATE CHECKED: 06/01/2018



DGW-MW-4

PROJECT NAME: Exide Deep	GW PDI	PROJECT NUMBER:	130-2086-06
SITE NAME: Exide - Frisco		LOCATION: Fris	co, TX
CLIENT: Exide Technologies		SURFACE ELEVATION	ON: 632.53 FT AMSL
GEOLOGIST: B. Works	NORTHING: 71017	11.03 FT	EASTING: 2480132.29 FT
DRILLER: G. Alejandro	STATIC WATER LEV	EL: 3.61 FT BTOC	COMPLETION DATE: 05/15/2018
DRILLING COMPANY: WEST D	rilling	DRILLING METHODS	S: HSA



ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bqs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018.

\* - Value indicated and confirmed by WEST Drilling on 05/23/2019.

CHECKED BY: JS

DATE CHECKED: 06/01/2018



PROJECT NAME: Exide Deep GW PDI PROJECT NUMBER: 130-2086-06 SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 630.47 FT AMSL CLIENT: Exide Technologies GEOLOGIST: B. Works NORTHING: 7102076.71 FT EASTING: 2479631.95 FT STATIC WATER LEVEL: 9.95 FT BTOC | COMPLETION DATE: 05/16/2018 DRILLER: G Alejandro DRILLING COMPANY: WEST Drilling DRILLING METHODS: HSA TOP OF CASING ELEVATION: 630.12 FT AMSL - PROTECTIVE CASING (ves) no): Steel STICK UP: 3.48 FT PEA GRAVEL OR SAND WEEP HOLE GROUND SURFACE ELEVATION: 626.99 FT AMSL DIAMETER OF RISER PIPE (in.): 2 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25 CONCRETE SEAL DEPTH (ft. bgs):  $2^*$ TYPE AND AMOUNT OF ANNULAR SEAL: NA TOP OF BENTONITE SEAL DEPTH (ft. bgs): 2\* - TYPE AND AMOUNT OF BENTONITE SEAL: Bent Plug 50 lbs - TOP OF SAND PACK DEPTH (ft. bgs): 3CENTRALIZER (yes /no) - TYPE: NA TOP OF SCREEN DEPTH (ft. bgs): 5.2 TYPE OF SCREEN: PVC Sch. 40 SCREEN SLOT SIZE (in.): 0.010 SIZE OF SAND PACK: 16/30 AMOUNT OF SAND: 450 lb BOTTOM OF SCREEN DEPTH (ft. bgs): 19.7 BOTTOM OF WELL DEPTH (ft. bgs): 20.0 TOTAL DEPTH OF BOREHOLE 20.0 BOTTOM OF FILTER PACK (ft. bgs): 20.0 (ft. bgs): TYPE AND AMOUNT OF BACKFILL: NA ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018. \* - Value indicated and confirmed by WEST Drilling 05/23/2019. CHECKED BY: JS PREPARED BY: BCW DATE CHECKED: 06/01/2018



PROJECT NAME: Exide Deep GW PDI PROJECT NUMBER: 130-2086-06 SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 643.30 FT AMSL CLIENT: Exide Technologies GEOLOGIST: B. Works NORTHING: 7102080.86 FT EASTING: 2479880.14 FT STATIC WATER LEVEL: 12.92 FT BTOC | COMPLETION DATE: 05/16/2018 DRILLER: G Alejandro DRILLING COMPANY: WEST Drilling DRILLING METHODS: HSA TOP OF CASING ELEVATION: 642.98 FT AMSL - PROTECTIVE CASING (yes) no): Steel STICK UP: 2.88 FT PEA GRAVEL OR SAND WEEP HOLE GROUND SURFACE ELEVATION: 640.42 FT AMSL DIAMETER OF RISER PIPE (in.): 2 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25 CONCRETE SEAL DEPTH (ft. bgs):  $2^*$ TYPE AND AMOUNT OF ANNULAR SEAL: NA - TOP OF BENTONITE SEAL DEPTH (ft. bgs):  $\frac{2^*}{}$ - TYPE AND AMOUNT OF BENTONITE SEAL: Bent Plug 200 lbs - TOP OF SAND PACK DEPTH (ft. bgs): 13.0CENTRALIZER ( yes /no) - TYPE: NA TOP OF SCREEN DEPTH (ft. bgs): 15.2 TYPE OF SCREEN: PVC Sch. 40 SCREEN SLOT SIZE (in.): 0.010 SIZE OF SAND PACK: 16/30 AMOUNT OF SAND: 400 lb BOTTOM OF SCREEN DEPTH (ft. bgs): 29.7 BOTTOM OF WELL DEPTH (ft. bgs): 30.0 TOTAL DEPTH OF BOREHOLE 30.0 BOTTOM OF FILTER PACK (ft. bgs): 30.0 (ft. bgs): TYPE AND AMOUNT OF BACKFILL: NA ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018. \* - Value indicated and confirmed by WEST Drilling on 05/23/2019. CHECKED BY: JS PREPARED BY: BCW DATE CHECKED: 06/01/2018



PROJECT NAME: Exide Deep GW PDI PROJECT NUMBER: 130-2086-06 SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 643.31 FT AMSL CLIENT: Exide Technologies GEOLOGIST: B. Works NORTHING: 7102104.29 FT EASTING: 2479782.04 FT STATIC WATER LEVEL: 13.20 FT BTOC | COMPLETION DATE: 05/16/2018 DRILLER: G Alejandro DRILLING COMPANY: WEST Drilling DRILLING METHODS: HSA TOP OF CASING ELEVATION: 643.01 FT AMSL PROTECTIVE CASING (ves) no): Steel STICK UP: 3.36 FT PEA GRAVEL OR SAND WEEP HOLE GROUND SURFACE ELEVATION: 639.95 FT AMSL DIAMETER OF RISER PIPE (in.): 2 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25 CONCRETE SEAL DEPTH (ft. bgs):  $2^*$ TYPE AND AMOUNT OF ANNULAR SEAL: NA TOP OF BENTONITE SEAL DEPTH (ft. bgs):  $2^*$ - TYPE AND AMOUNT OF BENTONITE SEAL: Bent Plug 200 lbs - TOP OF SAND PACK DEPTH (ft. bgs): 13.0CENTRALIZER ( yes /no) - TYPE: NA TOP OF SCREEN DEPTH (ft. bgs): 15.2 TYPE OF SCREEN: PVC Sch. 40 SCREEN SLOT SIZE (in.): 0.010 SIZE OF SAND PACK: 16/30 AMOUNT OF SAND: 450 lb BOTTOM OF SCREEN DEPTH (ft. bgs): 29.7 BOTTOM OF WELL DEPTH (ft. bgs): 30.0 TOTAL DEPTH OF BOREHOLE 30.0 BOTTOM OF FILTER PACK (ft. bgs): 30.0 (ft. bgs): TYPE AND AMOUNT OF BACKFILL: NA ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018. \* - Value indicated and confirmed by WEST Drilling on 05/23/2019. CHECKED BY: JS PREPARED BY: BCW DATE CHECKED: 06/01/2018



PROJECT NAME: Exide Deep GW PDI	PROJECT NUMBER: 130-2086-06
SITE NAME: Exide - Frisco	LOCATION: Frisco, TX
CLIENT: Exide Technologies	SURFACE ELEVATION: 644.37 FT AMSL
GEOLOGIST: B. Works NORTHING: 710	02209.64 FT EASTING: 2479510.83 FT
DRILLER: R WIlliams STATIC WATER	LEVEL: 24.24 FT BTOC COMPLETION DATE: 05/17/2018
DRILLING COMPANY: WEST Drilling	DRILLING METHODS: Direct Push/HSA
LOCK CAP	611 12 ft
	- TOP OF CASING ELEVATION: 644.13 ft
STICK UP: 4.11 FT	— PROTECTIVE CASING (yes) no): Steel
	— PEA GRAVEL OR SAND
	- WEEP HOLE 640.26 ft
	- WEEP HOLE GROUND SURFACE ELEVATION: 640.26 ft
	- DIAMETER OF RISER PIPE (in.): 2 ID (PVC)
14. A. A. A. A. A. A. A. A. A. A. A. A. A.	– DIAMETER OF BOREHOLE (in.): 7.25
	CONCRETE SEAL DEPTH (ft. bgs): 1*
	OCHONETE GEAE DET TIT (II. 1993).
00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   000000	
	– TYPE AND AMOUNT OF ANNULAR SEAL: NA
\$ \$200000000000000000000000000000000000	
00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   00000   000000	
00000   00000   00000   00000   00000   00000   00000	1*
10000	- TOP OF BENTONITE SEAL DEPTH (ft. bgs): 1*
	TYPE AND AMOUNT OF BENTONITE SEAL: Bent Plug 150 lbs
100 Per -	- TOP OF SAND PACK DEPTH (ft. bgs): 13.0
	- CENTRALIZER ( yes /no) - TYPE: NA
	- TOP OF SCREEN DEPTH (ft. bgs): 15.2
	TYPE OF SCREEN: PVC Sch. 40
	TYPE OF SCREEN: 1. 0.010
	SCREEN SLOT SIZE (in.): 0.010
	SIZE OF SAND PACK: 16/30
	AMOUNT OF SAND: 400 lb
	- BOTTOM OF SCREEN DEPTH (ft. bgs): 29.7
	BOTTOM OF WELL DEPTH (ft. bgs): 30.0
TOTAL DEPTH	
OF BOREHOLE (ft. bgs):	- BOTTOM OF FILTER PACK (ft. bgs): 30.0  - TYPE AND AMOUNT OF BACKFILL: NA
( 295).	
ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs pounds	s; ft feet; bgs - below ground surface; ID- Inside Diameter;
NA - Not Applicable; BTOC - Below Top of Casing	
Static Water level collected 05/22/2018.  * - Value indicated and confirmed by WEST Drilling on 05/23/2019.	
Table marked and definition by WEOT Diming on 00/20/2010.	
CHECKED BY: JS	
DATE CHECKED: 06/01/2018	PREPARED BY: BCW



PROJECT NAME: Exide Deep GW PDI PROJECT NUMBER: 130-2086-06 SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 645.11 FT AMSL CLIENT: Exide Technologies GEOLOGIST: B. Works NORTHING: 7101770.76 FT EASTING: 2480655.11 FT STATIC WATER LEVEL: 16.85 FT BTOC | COMPLETION DATE: 05/16/2018 DRILLER: G Alejandro DRILLING COMPANY: WEST Drilling DRILLING METHODS: Direct Push/HSA TOP OF CASING ELEVATION: 644.81 FT AMSL PROTECTIVE CASING (yes) no): Steel STICK UP: 2.89 FT PEA GRAVEL OR SAND WEEP HOLE GROUND SURFACE ELEVATION: 642.22 FT AMSL DIAMETER OF RISER PIPE (in.): 2 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25 CONCRETE SEAL DEPTH (ft. bgs):  $2^*$ TYPE AND AMOUNT OF ANNULAR SEAL: NA TOP OF BENTONITE SEAL DEPTH (ft. bgs):  $2^*$ - TYPE AND AMOUNT OF BENTONITE SEAL: Bent Plug 125 lbs – TOP OF SAND PACK DEPTH (ft. bgs): 8.0CENTRALIZER ( yes /no) - TYPE: NA TOP OF SCREEN DEPTH (ft. bgs): 10.2 TYPE OF SCREEN: PVC Sch. 40 SCREEN SLOT SIZE (in.): 0.010 SIZE OF SAND PACK: 16/30 AMOUNT OF SAND: 350 lb BOTTOM OF SCREEN DEPTH (ft. bgs): 24.7 BOTTOM OF WELL DEPTH (ft. bgs): 25.0 TOTAL DEPTH OF BOREHOLE 25.0 BOTTOM OF FILTER PACK (ft. bgs): 25.0(ft. bgs): TYPE AND AMOUNT OF BACKFILL: NA ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018. \* - Value indicated and confirmed by WEST Drilling on 05/23/2019. CHECKED BY: JS PREPARED BY: TJG DATE CHECKED: 06/01/2018



DGW-MW-10

PROJECT NAME: Exide Deep GW PDI

SITE NAME: Exide - Frisco

CLIENT: Exide Technologies

GEOLOGIST: B. Works

NORTHING: 7101803.95 FT

DRILLER: R. Williams

STATIC WATER LEVEL: 2.64 FT BTOC

DRILLING COMPANY: WEST Drilling

PROJECT NUMBER: 130-2086-06

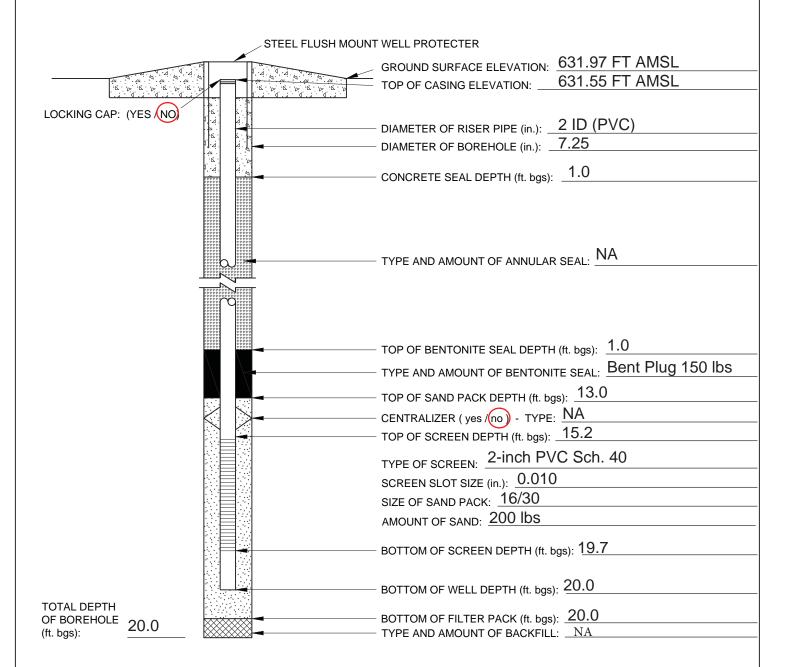
LOCATION: Frisco, TX

SURFACE ELEVATION: 631.91 FT AMSL

EASTING: 2479984.25 FT

COMPLETION DATE: 05/18/2018

DRILLING METHODS: HSA/Direct Push



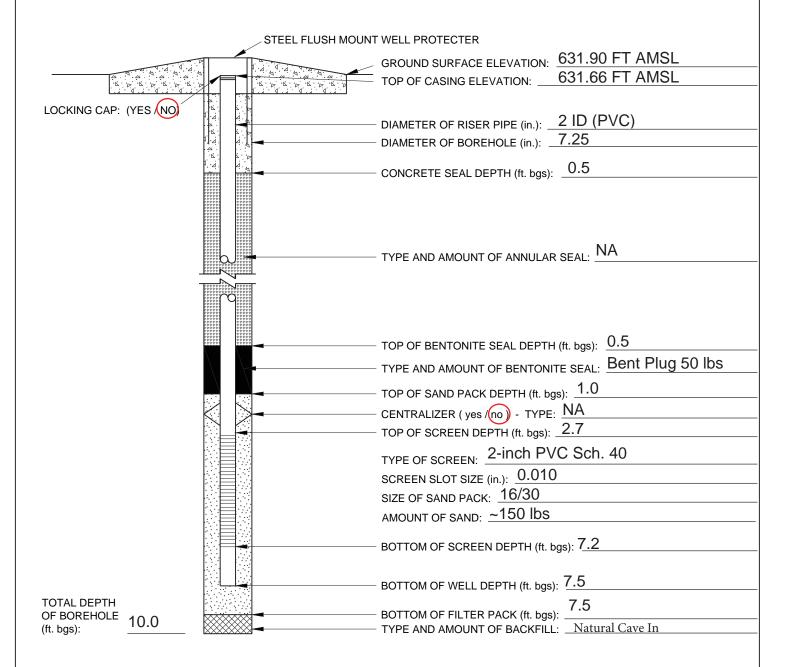
ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bqs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing Static Water level collected 05/22/2018.

CHECKED BY: J	S
DATE CHECKED:	06/01/2018



DGW-MW-10S

PROJECT NAME: Exide Deep GW	/ PDI	PROJECT NUMBER:	130-2086-06
SITE NAME: Exide - Frisco		LOCATION: Frise	co, TX
CLIENT: Exide Technologies		SURFACE ELEVATION	ON: 631.89 FT AMSL
GEOLOGIST: B. Works	NORTHING: 710180	02.23 FT	EASTING: 2479985.94 FT
DRILLER: R. Williams	STATIC WATER LEV	EL: 7.08 FT BTOC	COMPLETION DATE: 05/18/2018
DRILLING COMPANY: WEST Drill	ina	DRILLING METHODS	S HSA/Direct Push



ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet;
bas - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing
Static Water level collected 05/22/2018.

CHECKED BY: J	S
DATE CHECKED:	06/01/2018



DGW-MW-11

PROJECT NAME: Exide Deep GW PDI

SITE NAME: Exide - Frisco

CLIENT: Exide Technologies

GEOLOGIST: B. Works

DRILLER: R. Williams

DRILLING COMPANY: WEST Drilling

PROJECT NUMBER: 130-2086-06

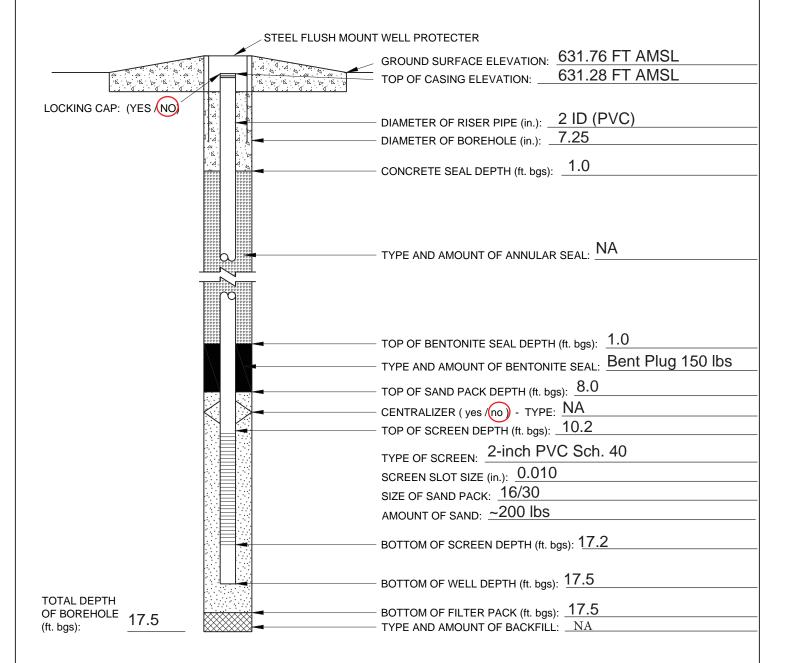
LOCATION: Frisco, TX

SURFACE ELEVATION: 631.69 FT AMSL

EASTING: 2479920.24 FT

COMPLETION DATE: 05/18/2018

DRILLING METHODS: HSA/Direct Push



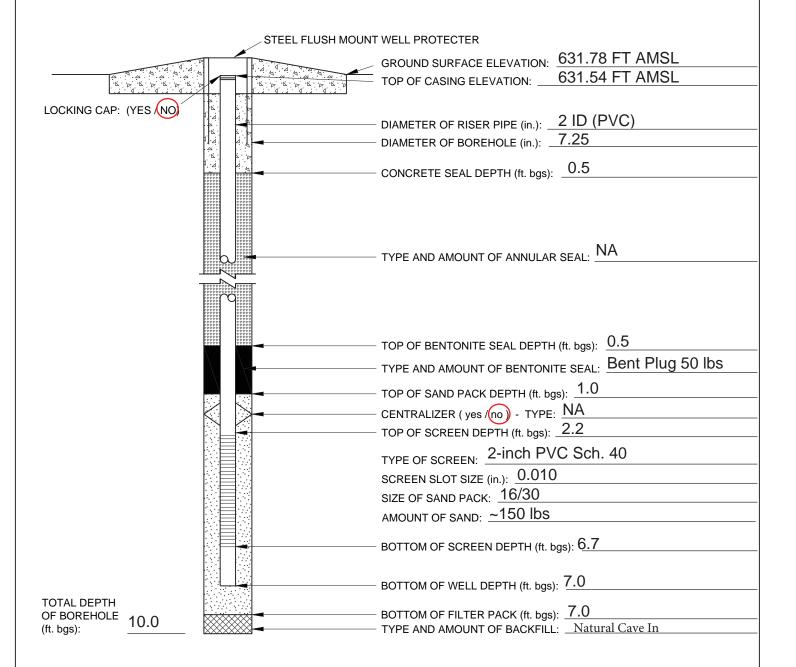
ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet;
bas - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing
Static Water level collected 05/22/2018.

CHECKED BY: J	S
DATE CHECKED:	06/01/2018



DGW-MW-11S

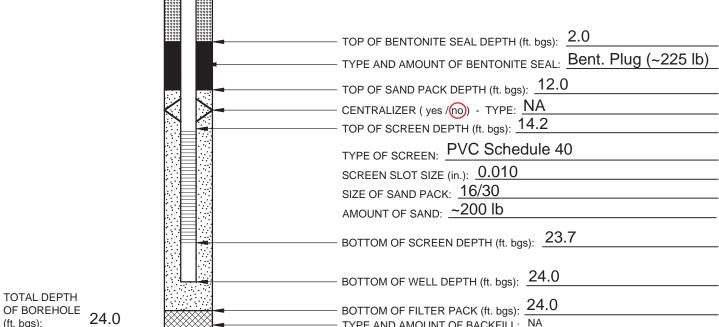
PROJECT NAME: Exide Deep G	W PDI	PROJECT NUMBER:	130-2086-06
SITE NAME: Exide - Frisco		LOCATION: Frise	co, TX
CLIENT: Exide Technologies		SURFACE ELEVATION	ON: 631.89 FT AMSL
GEOLOGIST: B. Works	NORTHING: 71018	53.99 FT	EASTING: 2479921.90 FT
DRILLER: R. Williams	STATIC WATER LEV	EL: 5.47 FT BTOC	COMPLETION DATE: 05/18/2018
DRILLING COMPANY: WEST Dr.	lling	DRILLING METHODS	S: HSA



ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet;
bas - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing
Static Water level collected 05/22/2018.

CHECKED BY: J	S
DATE CHECKED:	06/01/2018

# S GOLDER ABOVE GROUND MONITORING WELL CONSTRUCTION LOG DGW-MW-12 PROJECT NUMBER: 130-2086-06 PROJECT NAME: RAP Subsurface Investigation SITE NAME: Exide - Frisco LOCATION: Frisco, TX SURFACE ELEVATION: 637.02 FT AMSL **CLIENT: Exide Technologies** GEOLOGIST: E. White NORTHING: 7102370 FT **EASTING: 2479330 FT** DRILLER: R. Williams STATIC WATER LEVEL: 13.26 FT BTOC | COMPLETION DATE: 01/22/2019 DRILLING COMPANY: WEST Drilling DRILLING METHODS: HSA TOP OF CASING ELEVATION: 640.22 FT AMSL PROTECTIVE CASING (ves) no): Aluminum STICK UP: ~3.5 FT PEA GRAVEL OR SAND GROUND SURFACE ELEVATION: 637.02 FT AMSL WEEP HOLE DIAMETER OF RISER PIPE (in.): 2.0 ID (PVC) DIAMETER OF BOREHOLE (in.): 7.25CONCRETE SEAL DEPTH (ft. bgs): 2.0TYPE AND AMOUNT OF ANNULAR SEAL: NA (Bentonite only)



TYPE AND AMOUNT OF BACKFILL: NA

ADDITIONAL NOTES: AMSL - Above Mean Sea Level; lbs. - pounds; ft. - feet; bgs - below ground surface; ID- Inside Diameter; NA - Not Applicable; BTOC - Below Top of Casing; HSA - Hollow Stem Auger; Bent. - Bentonite; PVC - Polyvinyl chloride. Static water level measured on 01/26/2019 prior to conductivity testing.

CHECKED BY: AGA/THR DATE CHECKED: 02/11/19

(ft. bgs):

PREPARED BY: EPW

ATTACHMENT D
WATER LEVEL ELEVATIONS OF THE WOODBINE AQUIFER, WINTER 1997



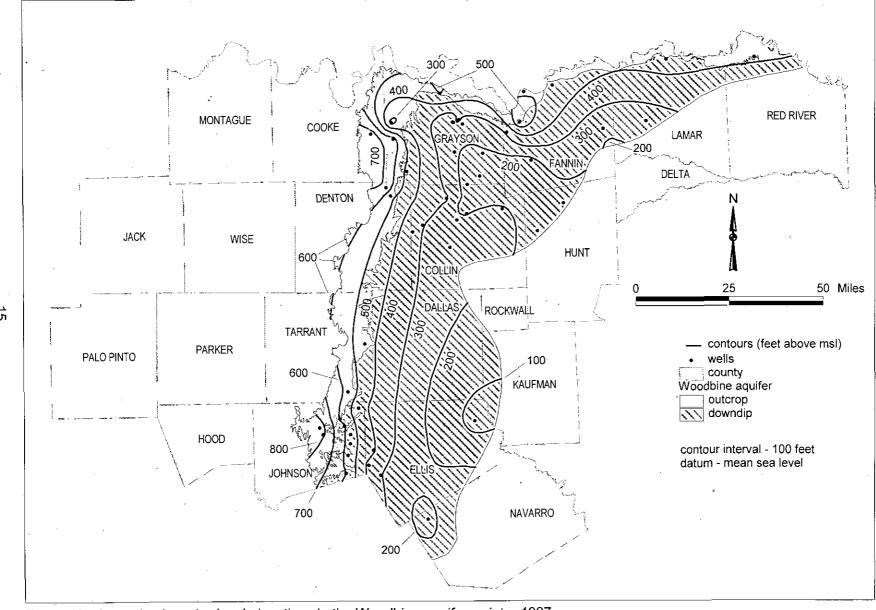


Figure 10. Approximate water-level elevations in the Woodbine aquifer, winter 1997.

ATTACHMENT E
WATER-LEVEL ELEVATIONS OF THE ANTLERS AND TWIN MOUNTAINS FORMATIONS,
WINTER 1997

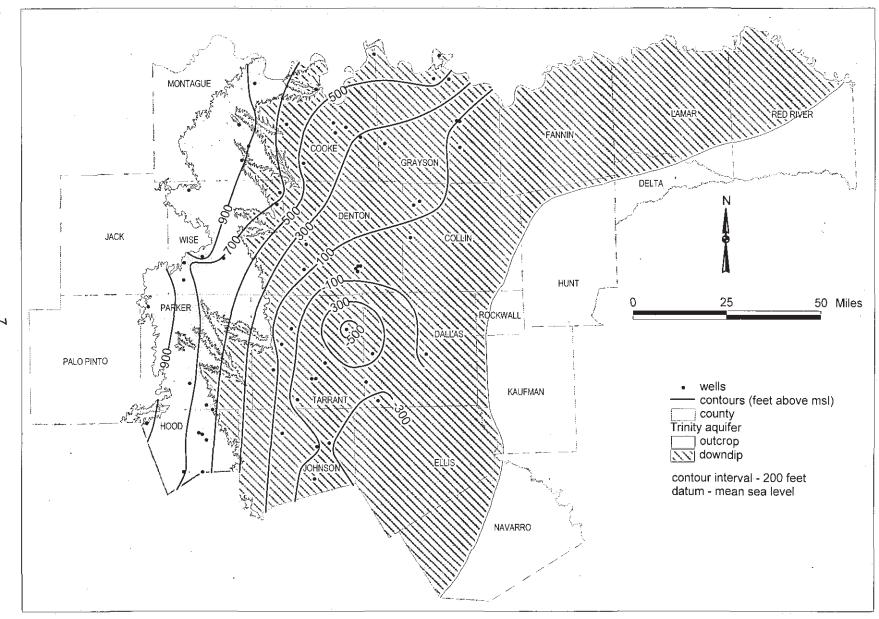


Figure 4. Approximate water-level elevations in the Antlers and Twin Mountains Formations, Trinity aquifer, winter 1997.

ATTACHMENT F
WATER-LEVEL ELEVATIONS OF THE PALUXY FORMATION, WINTER 1997

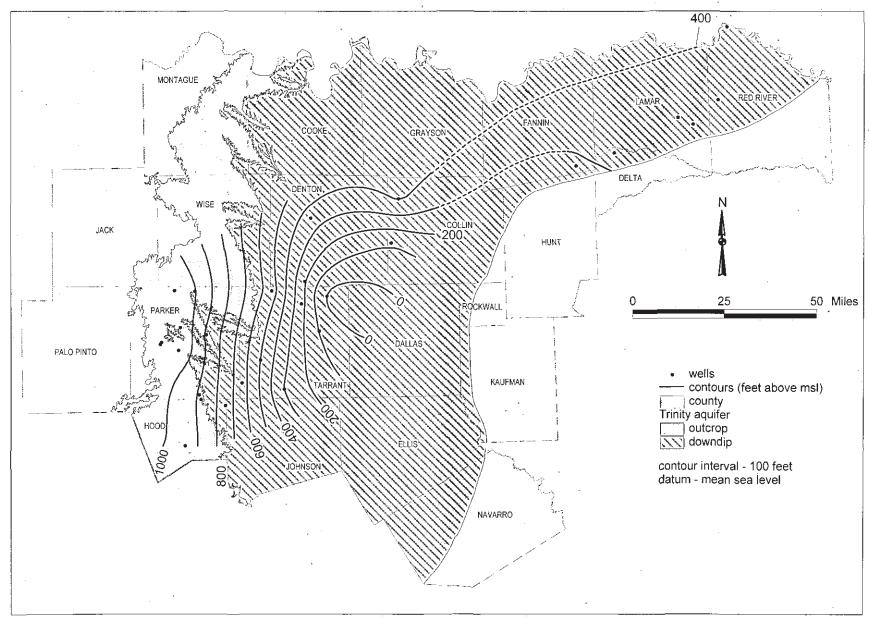


Figure 7. Approximate water-level elevations in the Paluxy Formation, Trinity aquifer, winter 1997.

ATTACHMENT G
CAMU PBW AQUIFER TEST RESULTS (TABLE 1)

# TABLE 1 AQUIFER TEST RESULTS AND CALCULATED WELL YIELDS

Boring/ Well Number	Type of Test	Hydraulic Conductivity	Saturated Thickness	Calculated Well Yield *
Bornig/ Wen Number	Test	K (cm/sec)	b (ft)	Q (gpd)
Clay				
B7N	Slug	1.0E-05	10.0	18
MW-14	Slug	4.2E-05	12.0	90
MW-17	Slug	7.6E-04	8.0	565
MW-19	Slug	4.5E-08	10.0	0.3
MW-20	Slug	2.5E-08	9.0	0.2
LMW-9	Slug	2.2E-06	6.0	2.0
Clayey Gravel (Unit GC enc	ountered ii	n boring)		
B5N	Slug	3.8E-03	4.0	654
MW-16S	Slug	1.3E-03	2.0	65
B9N	Slug	1.8E-03	2.0	88
LMW-5	Slug	3.4E-02	4.0	4,975
LMW-7	Slug	2.0E-04	2.0	12
LMW-8	Slug	4.5E-04	2.0	25
Gravels and Sands (Unit SP	/SW/SM/G	M/GW encounter	ed in boring)**	
MW-15	Slug	5.7E-03	4.5	1,192
MW-13	Slug	1.3E-02	2.0	536
LMW-17	Pump	1.2E-01	4.5	19,669
		Geomean K		
Avg for Clay		3.0E-06		
Avg for Clayey Gravel		1.7E-03		
Avg for Gravels or Sands		2.0E-02		

# Notes:

K = hydraulic conductivity

 $Q = 57,923*K*b^2$ 

7.2 +log (K\*b)

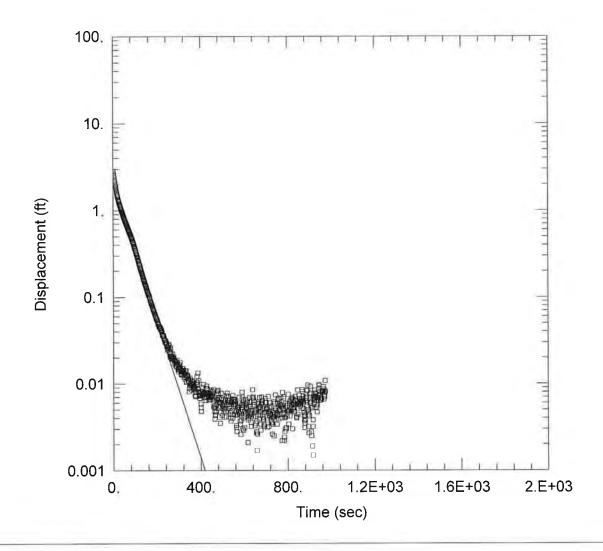
<sup>\*</sup> Well Yield formula from TCEQ TRRP-8 Section 2.7.1, Method 1

 $<sup>\</sup>ensuremath{^{**}}$  Includes clayey or sandy gravels described as "loose" on boring logs.

ATTACHMENT H
CAMU PBW SLUG TEST RESULTS

# SUMMARY OF PBW SLUG TEST RESULTS

Well Number	Test Type	Test Hydraulic Conductivity (cm/sec)	Average Hydraulic Conductivit (cm/sec)
2.57	G1 0 11	2 (F 02	2.05.02
B5N	Slug Out 1	3.6E-03	3.8E-03
	Slug Out 2	3.8E-03	
	Slug Out 3	3.8E-03	1
	Slug Out 4	3.9E-03	
B7N	Slug Out 1	1.0E-05	1.0E-05
Diri	Slug Out 2	8.7E-06	1.02 00
	Slug Out 3	1.1E-05	1
	Sing Out 5	1.11.03	1
B9N	Slug Out 1	1.8E-03	1.8E-03
	Slug Out 2	1.8E-03	
	Slug Out 3	1.8E-03	
MW-13	Slug Out 1	9.1E-03	1.3E-02
	Slug Out 2	1.9E-02	4
	Slug Out 3	9.6E-03	
N 4337 1 4	Clue Out 1	3.9E-05	4.1E-05
MW-14	Slug Out 1	4.1E-05	4.112-03
	Slug Out 2 Slug Out 3	4.1E-05 4.2E-05	-
	Sing Out 3	4.215-03	
MW-15	Slug Out 1	3.8E-03	5.7E-03
	Slug Out 2	5.5E-03	
	Slug Out 3	7.9E-03	
	Slug Out 4	7.7E-03	
	Slug In 1	3.6E-03	
	1 0 0	1.50.00	1.00.00
MW-16S	Slug Out 1	1.5E-03	1.3E-03
	Slug Out 2	1.3E-03	
	Slug Out 3	1.0E-03	
MW-17	Slug Out 1	7.0E-04	7.6E-04
TAT AA - T \	Slug Out 2	7.7E-04	7.02 04
	Slug Out 3	8.0E-04	7
	Diag Out 5	1	-
MW-19	Slug Out 1	2.2E-08	4.5E-08
171 17	Slug Out 2	6.8E-08	
MW-20	Slug Out 1	7.8E-09	2.5E-08
	Slug Out 2	4.2E-08	



#### **B5N SLUG OUT 1 UNCONFINED**

Data Set: J:\...\B5N SlugOut1\_unconfined.aqt

Date: 05/17/13 Time: 16:10:38

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15 Test Date:  $\frac{2}{2}$ 

#### **AQUIFER DATA**

Saturated Thickness: 4. ft Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B5N)

Initial Displacement: 2.82 ft Wellbore Radius: 0.33 ft

Screen Length: <u>4.</u> ft Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4. ft

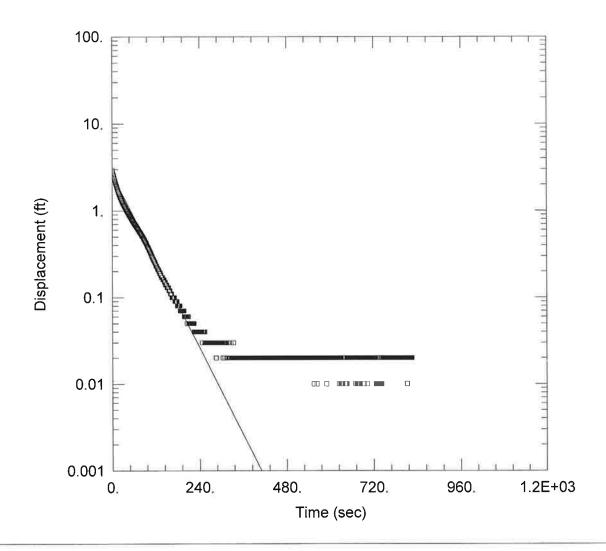
#### SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 0.003583 cm/sec

y0 = 1.924 ft



#### **B5N SLUG OUT 2 UNCONFINED**

Data Set: J:\...\B5N SlugOut2 unconfined.aqt

Date: <u>05/17/13</u> Time: <u>16:12:05</u>

# PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15 Test Date: 2/22/12

#### **AQUIFER DATA**

Saturated Thickness: 4. ft Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (B5N)

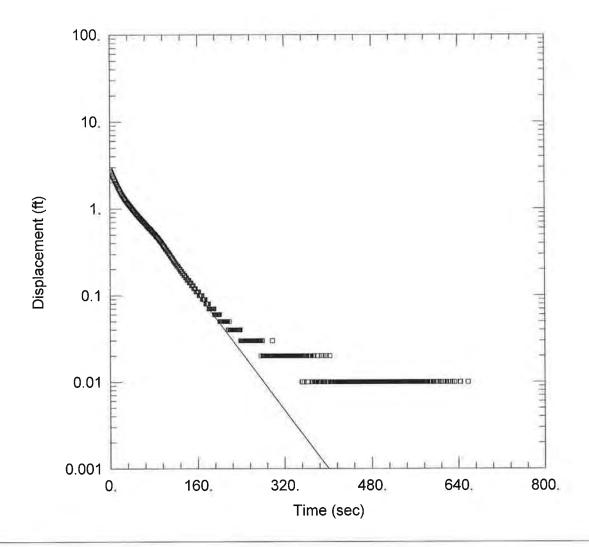
Initial Displacement: 2.82 ft Casing Radius: 0.17 ft Wellbore Radius: 0.33 ft Well Skin Radius: 0.33 ft

Screen Length: <u>4.</u> ft Total Well Penetration Depth: <u>4.</u> ft Gravel Pack Porosity: 0.2

#### SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.00382 cm/sec y0 = 2.677 ft



#### **B5N SLUG OUT 3 UNCONFINED**

Data Set: J:\...\B5N SlugOut3\_unconfined.aqt

Date: 05/17/13 Time: 16:12:31

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15
Test Date: 2/22/12

#### **AQUIFER DATA**

Saturated Thickness: 4. ft Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B5N)

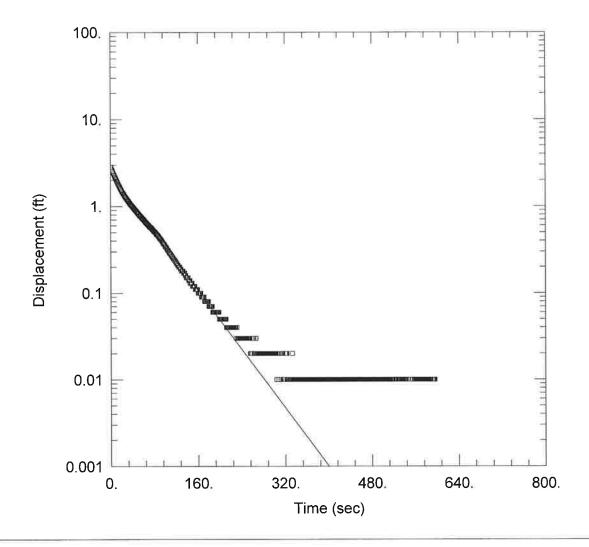
Initial Displacement: 2.82 ft Casing Radius: 0.17 ft Wellbore Radius: 0.33 ft Well Skin Radius: 0.33 ft

Screen Length: 4. ft Total Well Penetration Depth: 4. ft Gravel Pack Porosity: 0.2

#### SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: <u>Bouwer-Rice</u>

K = 0.003834 cm/sec y0 = 2.305 ft



# **B5N SLUG OUT 4 UNCONFINED**

Data Set: J:\...\B5N\_SlugOut4\_unconfined.aqt

Date: 05/17/13 Time: 16:12:55

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15
Test Date: 2/22/12

#### AQUIFER DATA

Saturated Thickness: 4. ft Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B5N)

Initial Displacement: 2.82 ft Wellbore Radius: 0.33 ft

Screen Length: 4. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4. ft

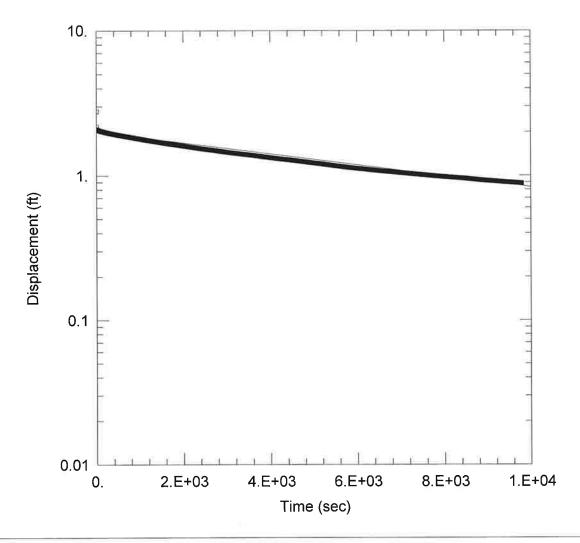
#### SOLUTION

Aquifer Model: Unconfined

K = 0.003861 cm/sec

Solution Method: Bouwer-Rice

y0 = 2.401 ft



# B-7N SLUG OUT 1

Data Set: J:\...\B7N\_SlugOut1.aqt

Date: 05/17/13

Time: 16:13:10

# PROJECT INFORMATION

Company: PBW, LLC

Client: Éxide

Test Location: Frisco Plant

Test Well: <u>B-7N</u> Test Date: <u>5/14/2012</u>

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (B-7N)

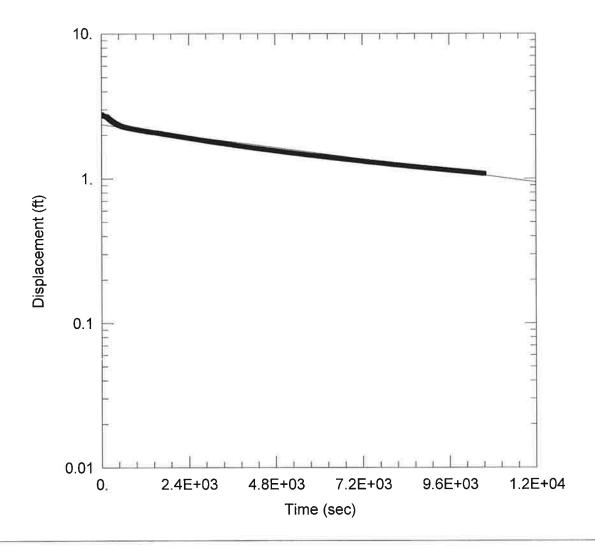
Initial Displacement: 2.78 ft
Wellbore Radius: 0.33 ft
Casing Radius: 0.17 ft
Well Skin Radius: 0.33 ft

Screen Length: 10. ft Total Well Penetration Depth: 10. ft Gravel Pack Porosity: 0.2

SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: <u>Bouwer-Rice</u>

K = 9.972E-06 cm/sec y0 = 2.006 ft



#### B-7N SLUG OUT 2

Data Set: J:\...\B7N\_SlugOut2.aqt

Date: <u>05/17/13</u> Time: <u>16:13:20</u>

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: <u>B-7N</u> Test Date: <u>5/15/2012</u>

#### **AQUIFER DATA**

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B-7N)

Initial Displacement: 2.78 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

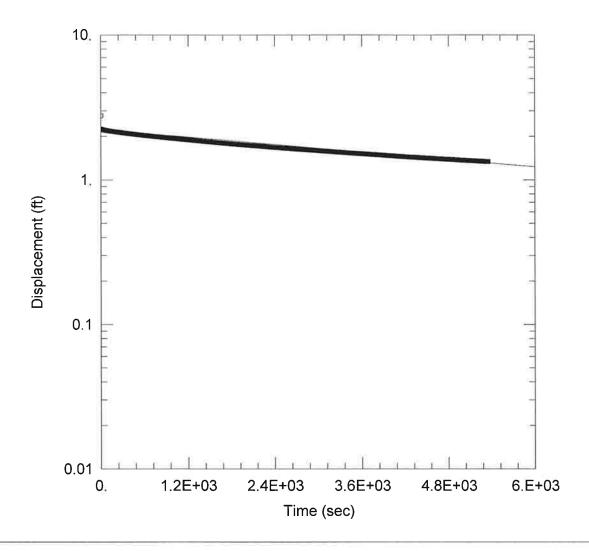
#### SOLUTION

Aquifer Model: Unconfined

K = 8.708E-06 cm/sec

Solution Method: Bouwer-Rice

y0 = 2.368 ft



# B-7N SLUG OUT 3

Data Set: J:\...\B7N\_SlugOut3.aqt

Date: 05/17/13

Time: 16:13:28

# PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: B-7N Test Date: 5/15/2012

#### **AQUIFER DATA**

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B-7N)

Initial Displacement: 2.78 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft
Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

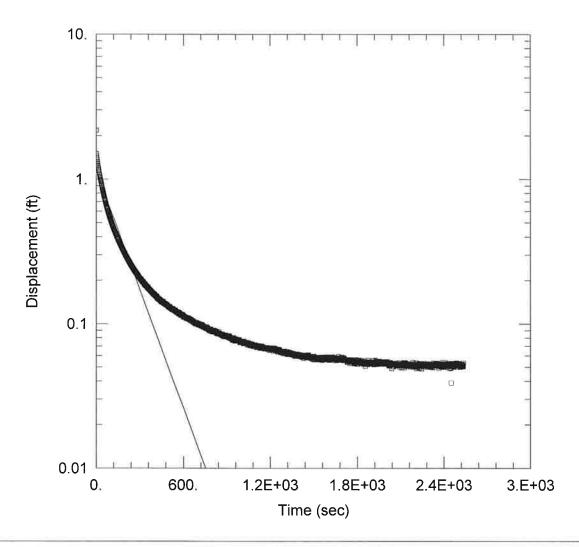
#### SOLUTION

Aquifer Model: Unconfined

K = 1.121E-05 cm/sec

Solution Method: Bouwer-Rice

y0 = 2.226 ft



# B-9N SLUG OUT 1

Data Set: J:\...\B9N SlugOut1.aqt

Date: 05/17/13

Time: 16:13:37

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: B-9N Test Date: 5/14/2012

#### AQUIFER DATA

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B-9N)

Initial Displacement: 1.5 ft

Wellbore Radius: 0.33 ft Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

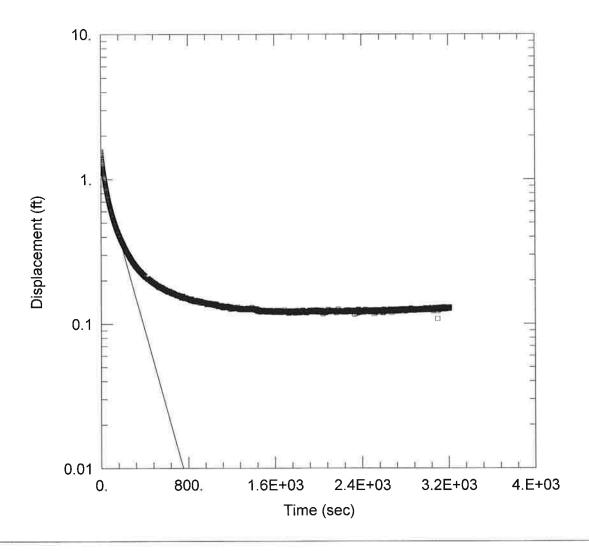
#### SOLUTION

Aquifer Model: Unconfined

K = 0.0018 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.159 ft



# B-9N SLUG OUT 2

Data Set: J:\...\B9N SlugOut2.aqt

Date: 05/17/13

Time: 16:13:46

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

LAIGE

Test Location: Frisco Plant

Test Well: <u>B-9N</u> Test Date: <u>5/14/2012</u>

#### AQUIFER DATA

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B-9N)

Initial Displacement: 1.5 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

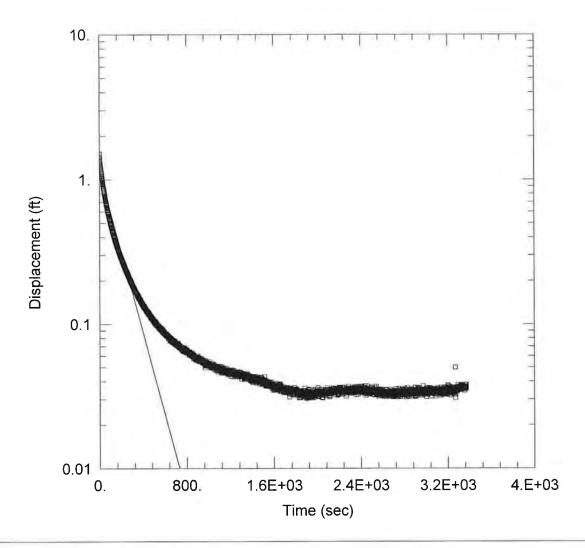
#### SOLUTION

Aquifer Model: Unconfined

K = 0.00179 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.143 ft



# B-9N SLUG OUT 3

Data Set: J:\...\B9N\_SlugOut3.aqt

Date: 05/17/13

Time: 16:13:55

#### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: B-9N Test Date: 5/14/2012

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (B-9N)

Initial Displacement: 1.5 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

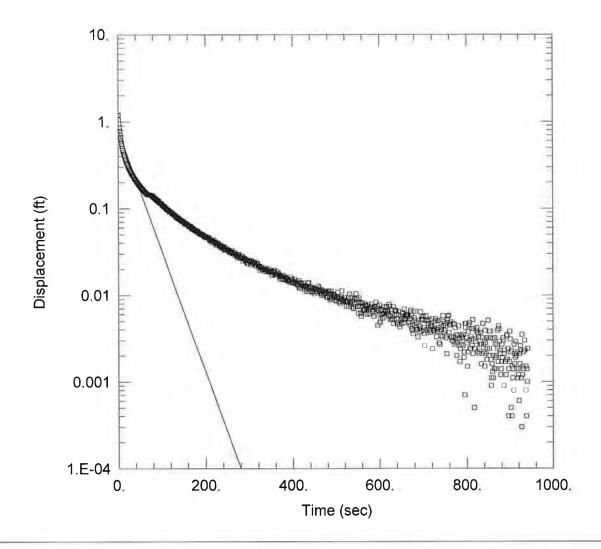
#### SOLUTION

Aquifer Model: Unconfined

K = 0.001847 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.164 ft



## MW-13 SLUG OUT 1

Data Set: J:\...\MW13\_SlugOut1.aqt

Date: 05/17/13

Time: 16:14:01

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: <u>MW-13</u> Test Date: <u>5/14/2012</u>

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA (MW-13)

Initial Displacement: 1.2 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

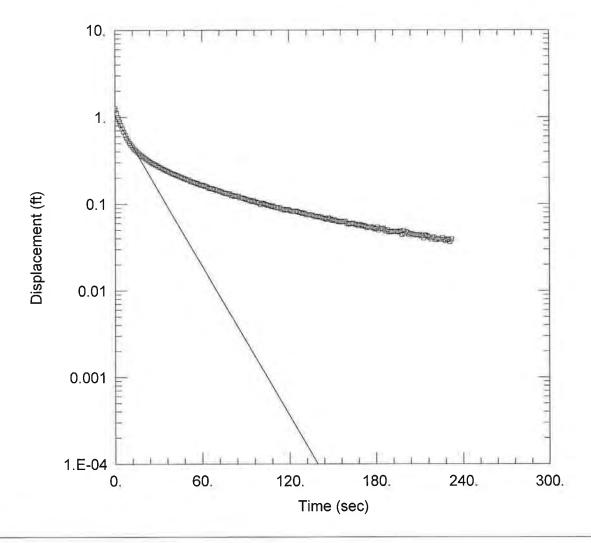
# SOLUTION

Aguifer Model: Unconfined

K = 0.009152 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.8143 ft



## MW-13 SLUG OUT 2

Data Set: J:\...\MW13\_SlugOut2.aqt

Date: 05/17/13

Time: 16:14:13

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/15/2012

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-13)

Initial Displacement: 1.2 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

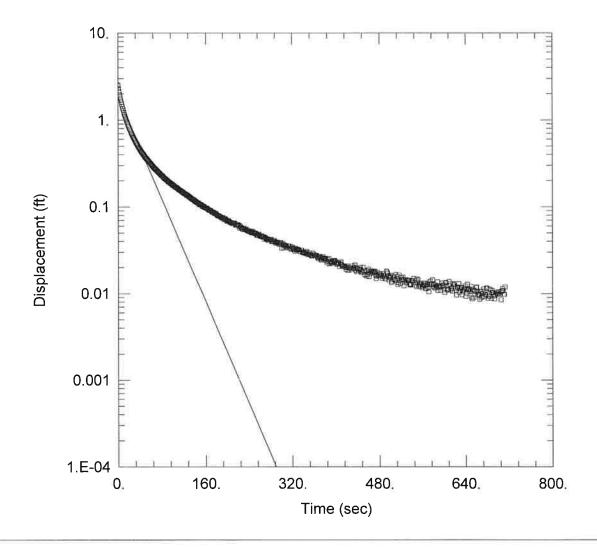
#### SOLUTION

Aquifer Model: Unconfined

K = 0.01887 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.03 ft



## MW-13 SLUG OUT 3

Data Set: J:\...\MW13\_SlugOut3.aqt

Date: 05/17/13

Time: 16:14:20

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: <u>MW-13</u> Test Date: <u>5/15/2012</u>

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-13)

Initial Displacement: 2.5 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

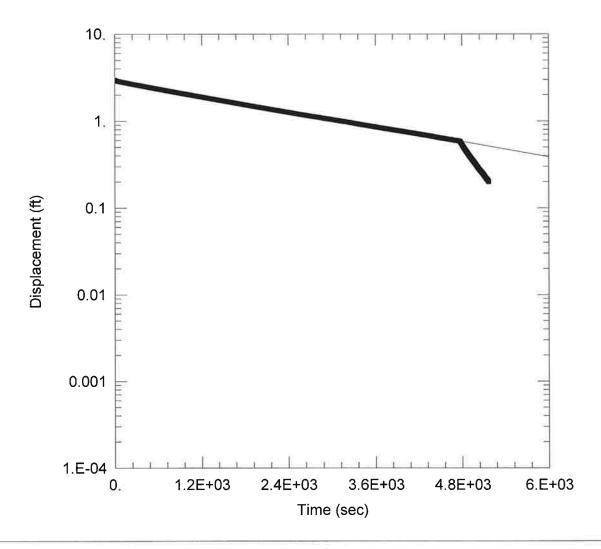
## SOLUTION

Aquifer Model: Unconfined

K = 0.009659 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.856 ft



## MW-14 SLUG OUT 1

Data Set: J:\...\MW-14\_SlugOut1.aqt

Date: 05/17/13

Time: 16:15:51

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/14/2012

#### **AQUIFER DATA**

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-14)

Initial Displacement: 2.95 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

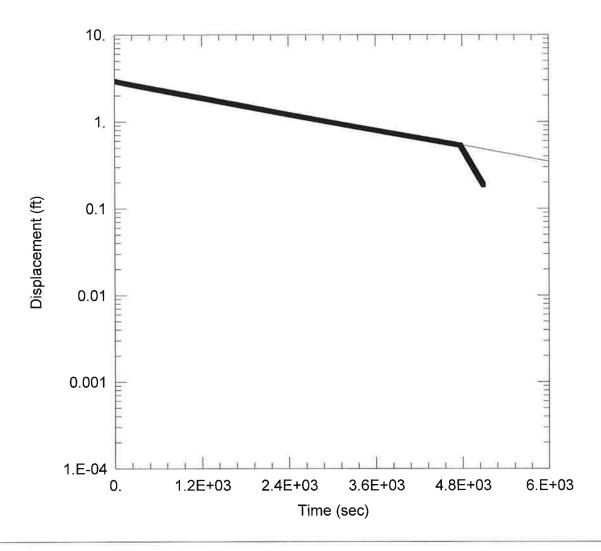
# SOLUTION

Aquifer Model: Unconfined

K = 3.897E-05 cm/sec

Solution Method: Bouwer-Rice

y0 = 3.027 ft



#### MW-14 SLUG OUT 2

Data Set: J:\...\MW-14\_SlugOut2.aqt

Date: 05/17/13

Time: 16:15:59

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/15/2012

#### **AQUIFER DATA**

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-14)

Initial Displacement: <u>2.95</u> ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

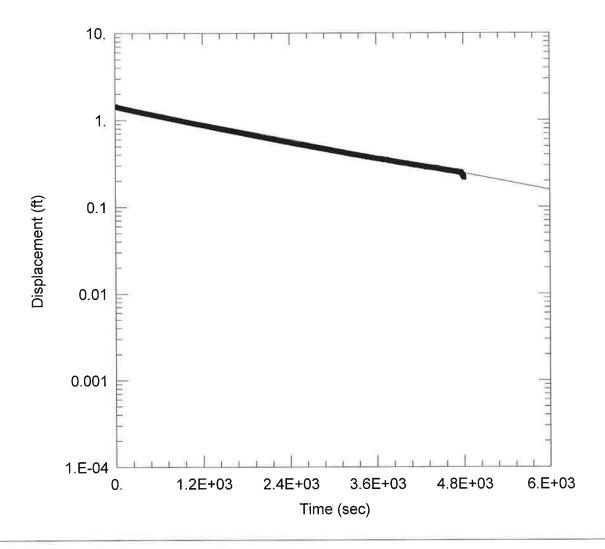
#### SOLUTION

Aquifer Model: Unconfined

K = 4.147E-05 cm/sec

Solution Method: Bouwer-Rice

y0 = 3.114 ft



### MW-14 SLUG OUT 3

Data Set: J:\...\MW-14\_SlugOut3.aqt

Date: 05/17/13

Time: 16:16:06

### **PROJECT INFORMATION**

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/15/2012

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-14)

Initial Displacement: 1.45 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft
Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

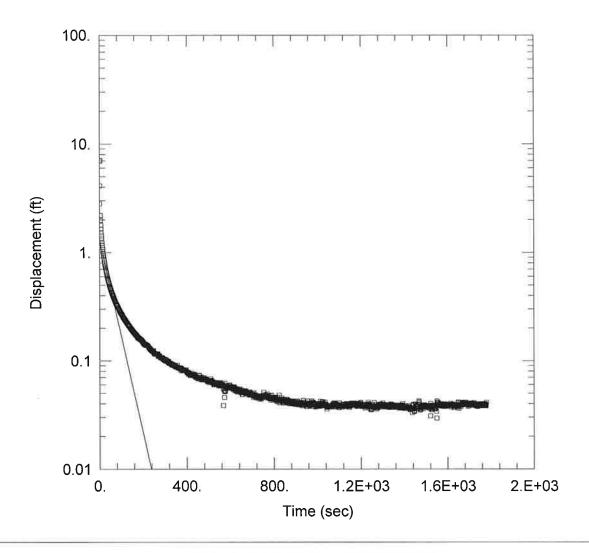
SOLUTION

Aquifer Model: Unconfined

K = 4.219E-05 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.463 ft



## MW-15 SLUG OUT 1 UNCONFINED

Data Set: J:\...\MW-15\_SlugOut1\_unconfined.aqt

Date: 05/17/13

Time: 16:16:22

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15
Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 4.5 ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-15)

Initial Displacement: 2.82 ft Wellbore Radius: 0.33 ft

Screen Length: 4.5 ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4.5 ft

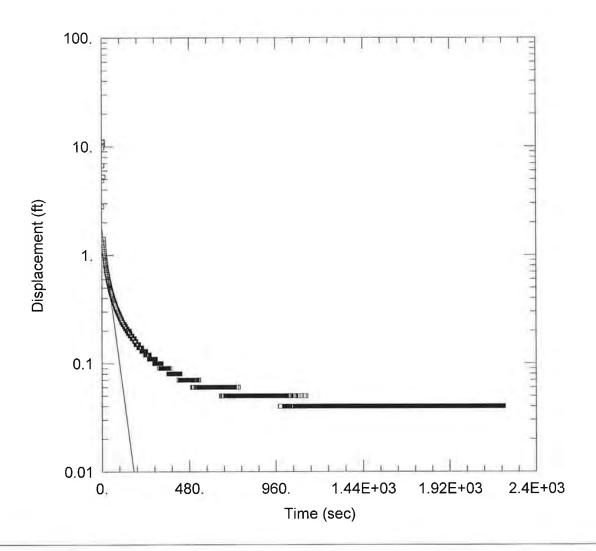
#### SOLUTION

Aquifer Model: Unconfined

K = 0.003794 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.309 ft



#### MW-15 SLUG OUT 2 UNCONFINED

Data Set: J:\...\MW-15 SlugOut2 unconfined.aqt

Date: 05/17/13 Time: 16:16:39

#### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15 Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 4.5 ft Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-15)

Initial Displacement: <u>2.82</u> ft Wellbore Radius: <u>0.33</u> ft

Screen Length: 4.5 ft
Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4.5 ft

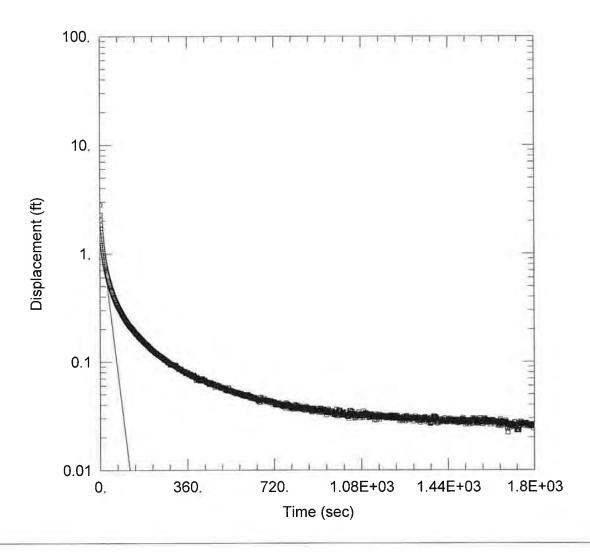
#### SOLUTION

Aquifer Model: Unconfined

K = 0.005536 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.779 ft



#### MW-15 SLUG OUT 3 UNCONFINED

Data Set: J:\...\MW-15 SlugOut3 unconfined.aqt

Date: 05/17/13 Time: 16:16:47

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15
Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 4.5 ft Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-15)

Initial Displacement: 2.82 ft Wellbore Radius: 0.33 ft Screen Length: 4.5 ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4.5 ft

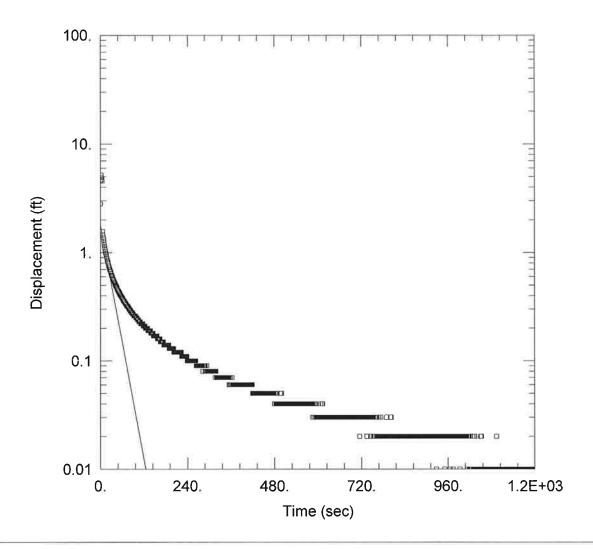
#### SOLUTION

Aquifer Model: Unconfined

K = 0.007917 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.848 ft



## **SLUG OUT 4 UNFCONFINED**

Data Set: J:\...\MW-15\_SlugOut4\_unfonfined.aqt

Date: 05/17/13

Time: 16:16:55

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15 Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 4.5 ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-15)

Initial Displacement: 2.82 ft

Wellbore Radius: 0.33 ft Screen Length: 4.5 ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4.5 ft

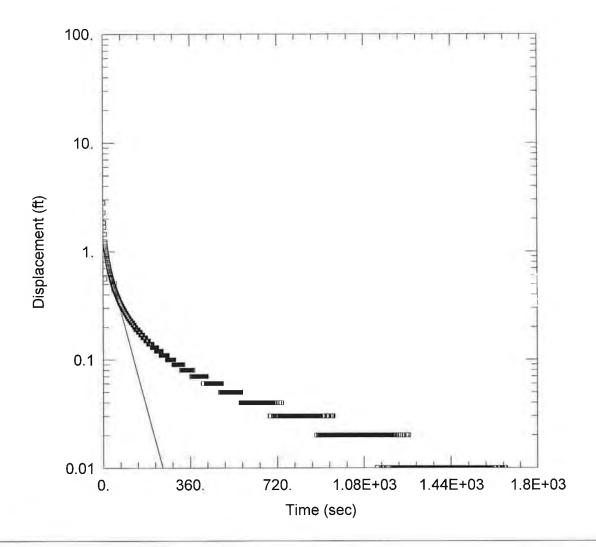
#### SOLUTION

Aquifer Model: Unconfined

K = 0.007719 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.802 ft



#### **SLUG IN 1 UNFCONFINED**

Data Set: J:\...\MW-15\_SlugIn1\_unconfined.aqt

Date: 05/17/13 Time: 16:16:14

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-15
Test Date: 2/21/12

## AQUIFER DATA

Saturated Thickness: 4.5 ft Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-15)

Initial Displacement: 2.82 ft Wellbore Radius: 0.33 ft Screen Length: 4.5 ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 4.5 ft

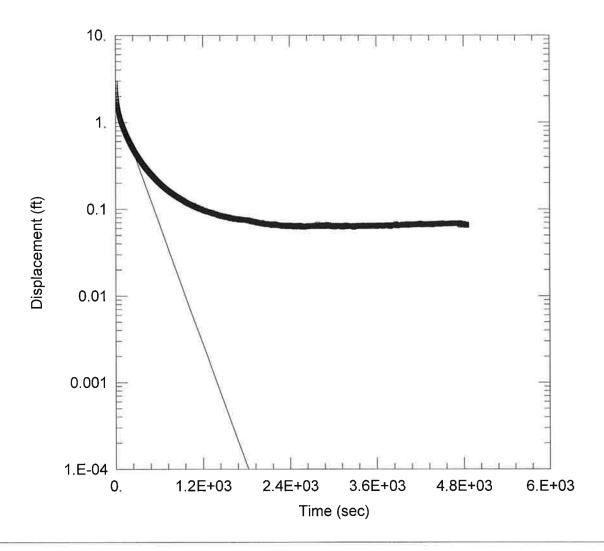
#### SOLUTION

Aquifer Model: Unconfined

K = 0.003563 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.145 ft



## MW-16S SLUG OUT 1

Data Set: J:\...\MW16S SlugOut1.aqt

Date: 05/17/13 Time: 16:14:31

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/14/2012

#### **AQUIFER DATA**

Saturated Thickness: 2. ft Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-16S)

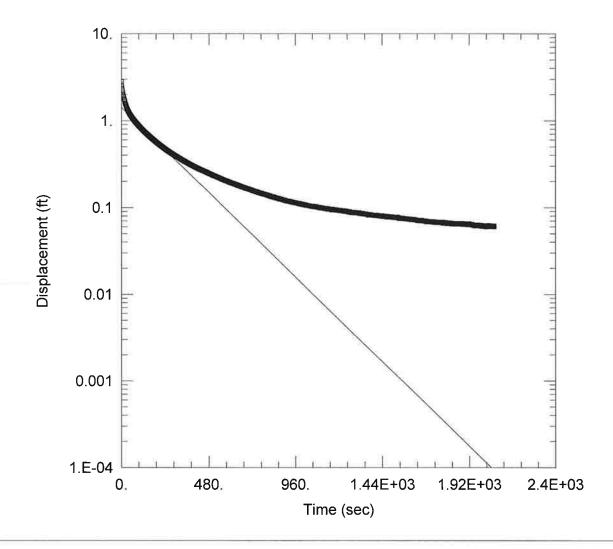
 $\begin{array}{lll} \text{Initial Displacement:} & \underline{2.8} \text{ ft} & \text{Casing Radius:} & \underline{0.17} \text{ ft} \\ \text{Wellbore Radius:} & \underline{0.33} \text{ ft} & \text{Well Skin Radius:} & \underline{0.33} \text{ ft} \end{array}$ 

Screen Length: 2. ft Total Well Penetration Depth: 2. ft Gravel Pack Porosity: 0.2

## SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: <u>Bouwer-Rice</u>

K = 0.00152 cm/sec y0 = 1.682 ft



#### MW-16S SLUG OUT 2

Data Set: J:\...\MW16S\_SlugOut2.aqt

Date: 05/17/13

Time: 16:14:59

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/14/2012

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-16S)

Initial Displacement: 2.8 ft Wellbore Radius: 0.33 ft

Screen Length: 2. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

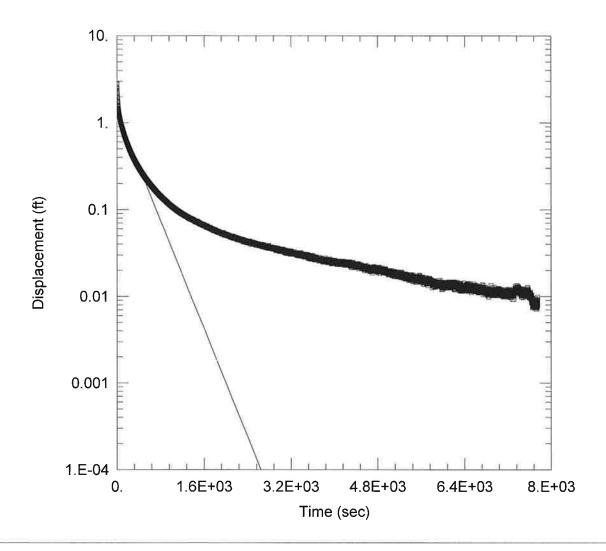
#### SOLUTION

Aquifer Model: Unconfined

K = 0.001333 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.415 ft



#### MW-16S SLUG OUT 3

Data Set: J:\...\MW16S\_SlugOut3.aqt

Date: <u>05/17/13</u> Time: <u>16:15:09</u>

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/15/2012

#### **AQUIFER DATA**

Saturated Thickness: 2. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-16S)

Initial Displacement: 2.8 ft
Wellbore Radius: 0.33 ft

Screen Length: 2. ft Gravel Pack Porosity: 0.2 Casing Radius: 0.17 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 2. ft

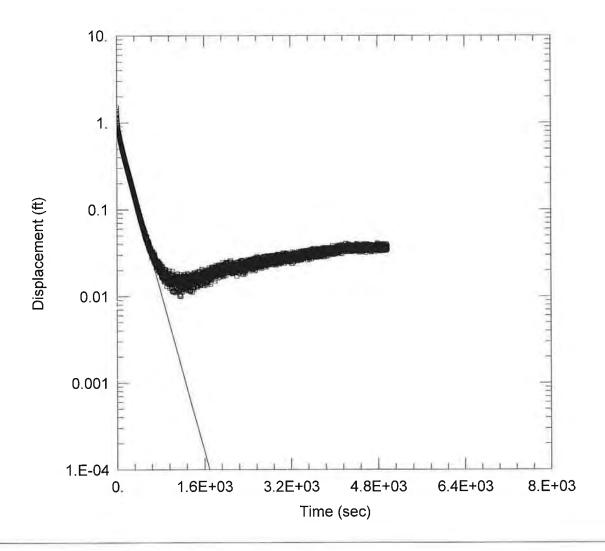
#### SOLUTION

Aquifer Model: Unconfined

K = 0.001024 cm/sec

Solution Method: Bouwer-Rice

y0 = 1.35 ft



#### MW-17 SLUG OUT 1

Data Set: J:\...\MW17\_SlugOut1.aqt

Date: 05/17/13 Time: 16:15:17

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/14/2012

#### AQUIFER DATA

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-17)

Initial Displacement: 1.5 ft

Wellbore Radius: 0.33 ft

Well Skin Radius: 0.33 ft

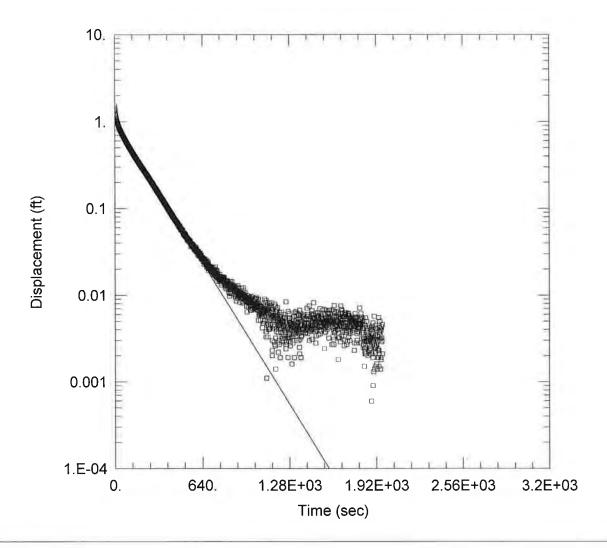
Tatal Wall Baratratian Da

Screen Length: 8. ft Total Well Penetration Depth: 8. ft Gravel Pack Porosity: 0.2

#### SOLUTION

Aguifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0007008 cm/sec y0 = 0.8185 ft



## MW-17 SLUG OUT 2

Data Set: J:\...\MW17 SlugOut2.aqt

Date: 05/17/13 Time: 16:15:32

#### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/14/2012

#### **AQUIFER DATA**

Saturated Thickness: 8. ft Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-17)

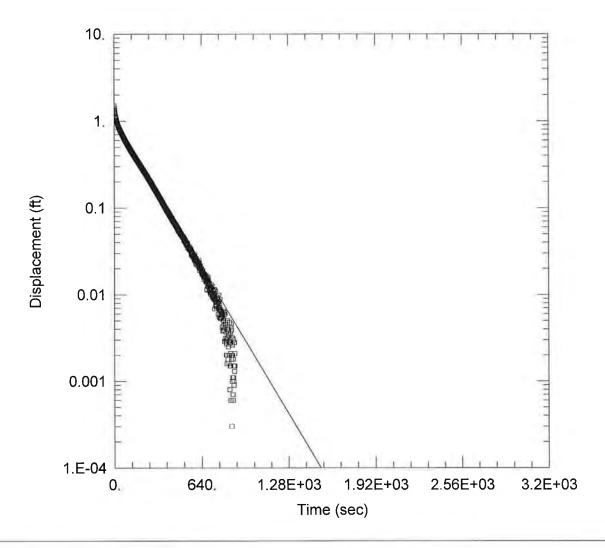
Initial Displacement: 1.5 ft Casing Radius: 0.17 ft Wellbore Radius: 0.33 ft Well Skin Radius: 0.33 ft

Screen Length: 8. ft Total Well Penetration Depth: 8. ft Gravel Pack Porosity: 0.2

#### SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: <u>Bouwer-Rice</u>

K = 0.0007729 cm/sec y0 = 1.03 ft



## MW-17 SLUG OUT 3

Time: 16:15:42

Data Set: J:\...\MW17\_SlugOut3.aqt

Date: 05/17/13

#### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-13 Test Date: 5/15/2012

#### **AQUIFER DATA**

Anisotropy Ratio (Kz/Kr): 1. Saturated Thickness: 8. ft

## WELL DATA (MW-17)

Initial Displacement: 1.5 ft Casing Radius: 0.17 ft Wellbore Radius: 0.33 ft Well Skin Radius: 0.33 ft

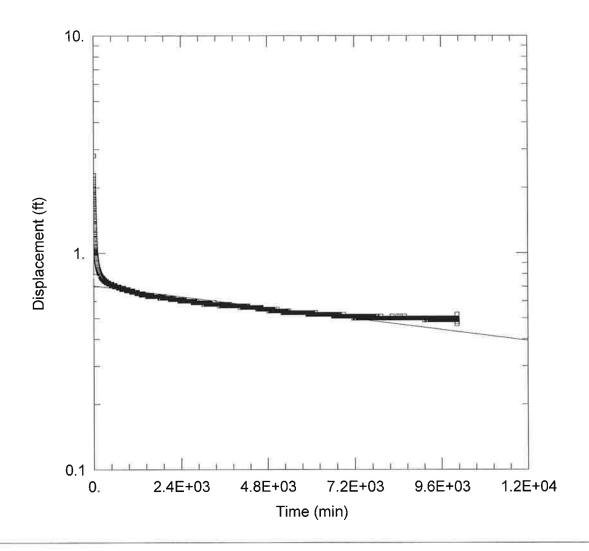
Screen Length: 8. ft Total Well Penetration Depth: 8. ft Gravel Pack Porosity: 0.2

#### SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0007977 cm/sec

y0 = 1.003 ft



#### MW-19 SLUG OUT 1

Data Set: J:\...\MW-19 SlugOut1.aqt

Date: 05/17/13

Time: 16:17:17

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-19
Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-19)

Initial Displacement: 2.81 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.083 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

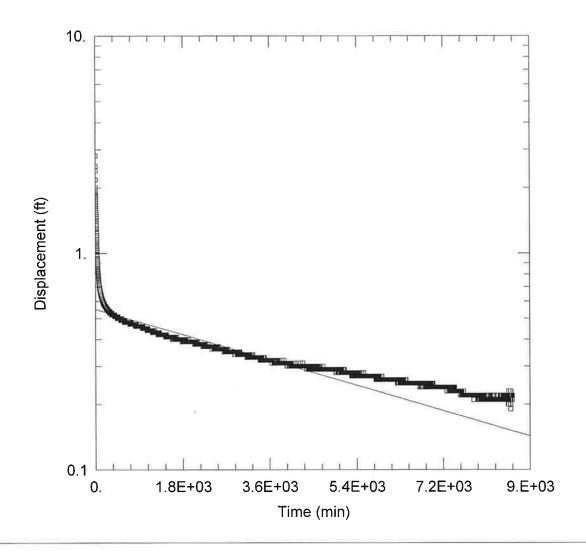
#### SOLUTION

Aquifer Model: Unconfined

K = 2.196E-08 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.7066 ft



#### MW-19 SLUG OUT 2

Data Set: J:\...\MW-19\_SlugOut2.aqt

Date: 05/17/13

Time: 16:17:34

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-19
Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-19)

Initial Displacement: 2.81 ft Wellbore Radius: 0.33 ft

Screen Length: 10. ft

Gravel Pack Porosity: 0.2

Casing Radius: 0.083 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 10. ft

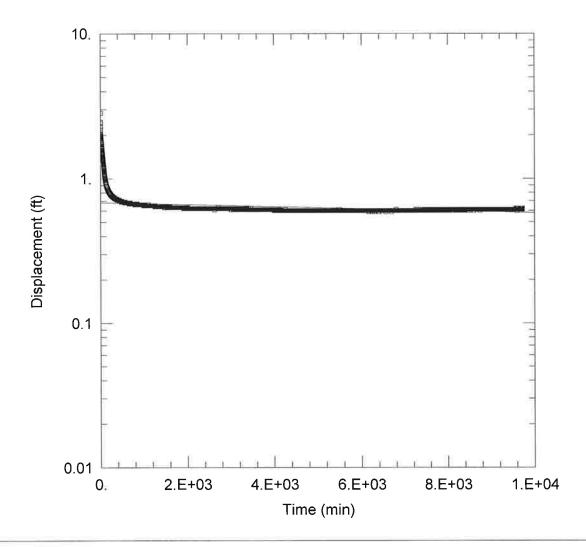
#### SOLUTION

Aquifer Model: Unconfined

K = 6.765E-08 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.5509 ft



## MW-20 SLUG OUT 1

Data Set: J:\...\MW-20 Out1.aqt

Date: 05/17/13 Time: 16:17:43

### PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well: MW-20 Test Date: 2/21/12

#### **AQUIFER DATA**

Saturated Thickness: 9. ft

Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (MW-20)

Initial Displacement: 2.84 ft Wellbore Radius: 0.33 ft

Screen Length: 9. ft Gravel Pack Porosity: 0.2 Casing Radius: 0.083 ft Well Skin Radius: 0.33 ft

Total Well Penetration Depth: 9. ft

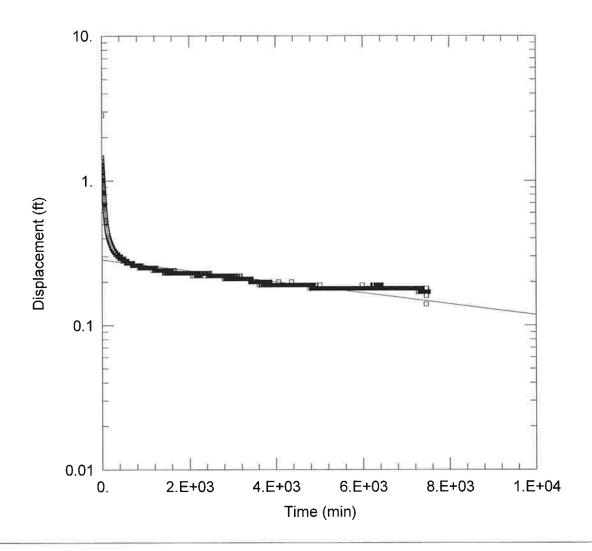
#### SOLUTION

Aquifer Model: Unconfined

K = 7.836E-09 cm/sec

Solution Method: Bouwer-Rice

y0 = 0.6824 ft



#### MW-20 SLUG OUT 2

Data Set: J:\...\MW-20\_Out2.aqt

Date: <u>05/17/13</u> Time: <u>16:17:50</u>

## PROJECT INFORMATION

Company: PBW, LLC

Client: Exide

Test Location: Frisco Plant

Test Well:  $\underline{MW-20}$ Test Date:  $\underline{2/21/12}$ 

#### **AQUIFER DATA**

Saturated Thickness: 9. ft

Anisotropy Ratio (Kz/Kr): 1.

## WELL DATA (MW-20)

Total Well Penetration Depth: 9. ft

SOLUTION

Aquifer Model: Unconfined

Gravel Pack Porosity: 0.2

Solution Method: Bouwer-Rice

K = 4.245E-08 cm/sec

Screen Length: 9. ft

y0 = 0.2844 ft

ATTACHMENT I J&N (1995) SLUG AND PUMP TEST ANALYSIS

#### **GNB TECHNOLOGIES**

Frisco, Texas

## Pumping Test Calculations LMW-17

July 25 & 26, 1995

Transmissivity = T = 264 (Q) / delta s where:

Q = Flow rate = 8 GPM

delta s = drawdown per log cycle = 0.19 foot

therefore:

T = 264 (8)/0.19

T = 11,116 gpd/ft

T = Km

where:

T = transmissivity = 11,116 gpd/ft

K = the hydraulic conductivity

m = the aquifer thickness = 4.5 feet

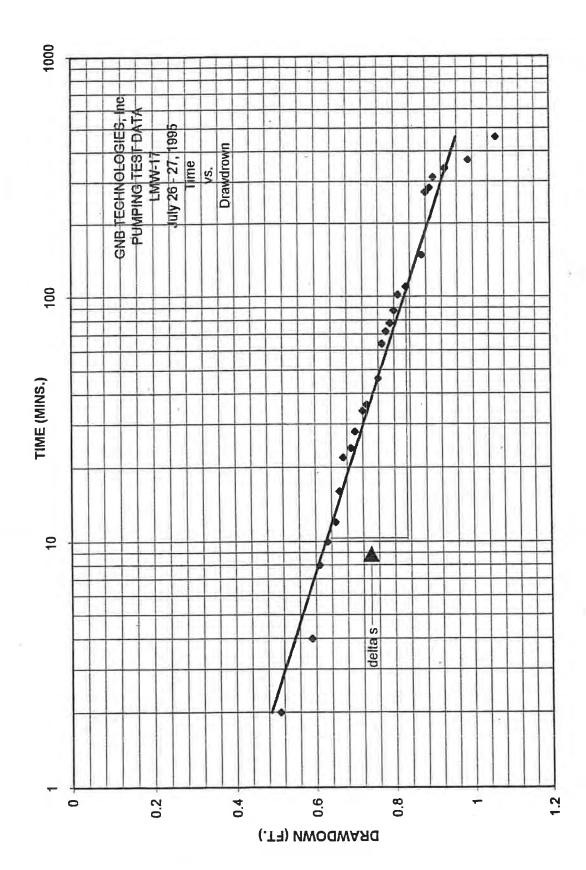
therefore:

K = T/m

K = 11,116/4.5

K = 2,470 gpd/ft = 0.1165 cm/sec

**GNB PUMPING TEST LMW-17** 



RMT/JN REPORT

GNB TECHNOLOGIES, INC.

AUGUST 1995

FINAL COPY

Table 5-2

## Summary of Slug Test Data June 26, 1995 GNB Technologies, Inc., Frisco, Texas

Well #	Analysis Method	Hydraulic Conductivity (gpd/ft²)	Hydraulic Conductivity (cm/sec)	Transmissivity (gpd/ft)	Material
MW-5	Cooper	719.25	3.4 x 10 <sup>-2</sup>	2877.12	Sand and Gravel
MW-7	Bouwer & Rice	4.321	2.0 x 10 <sup>-4</sup>	17.28	Clayey Gravel and Clay
MW-8	Bouwer & Rice	9.633	4.5 x 10 <sup>-4</sup>	27.74	Clayey Gravel and Clay
MW-9	Bouwer & Rice	0.047	2.2 x 10 <sup>-6</sup>	0.56	Clay



golder.com