SCS ENGINEERS



CORRECTIVE ACTION PLAN SOUTHEAST COUNTY LANDFILL LITHIA, FLORIDA

Submitted to:

Hillsborough County Public Works Department Solid Waste Management Division 332 N. Falkenburg Rd. Tampa, Florida 33619



Prepared by:

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> June 26 2017 File No. 09215600.04

Offices Nationwide www.scsengineers.com

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Bruce J. Clark, P.E. 6/26/1, No. 31924

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Southeast County Landfill

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1 BACKGROUND

During the February 2016 groundwater monitoring event at the Southeast County Landfill (SCLF), elevated readings were observed by the Hillsborough County Public Works Department, Solid Waste Management Division (SWMD) for select parameters at monitoring well TH-67. TH-67 is a detection well approximately 45 feet east of Phase II and monitors surficial groundwater at the SCLF. Since that time, the SWMD and its engineering Consultant, SCS Engineers (SCS), have been conducting investigations of potential causes for the elevated readings and have installed additional measures to monitor the area of concern. As a result of the investigations, it has been determined that the most likely cause of the elevated parameters was the overtopping of the east containment berm due to elevated leachate levels or seepage from isolated saturated zone within the Phase II disposal area.

The results of the on-going investigation have been shared with the Florida Department of Environmental Protection (FDEP) in multiple reports, weekly emails, and meetings. The objective of this Corrective Action Plan (Plan) is to pull all of these reports together into one document, monitor the elevated liquid level in piezometers sealed in the leachate collection and removal system (LCRS), monitor water quality in the area adjacent to Phase II, and to propose actions that the SWMD will take to reduce the leachate head on liner to an Approved Operating Level. This Plan is part of, and only related, to a Consent Agreement between the SWMD and FDEP.

A Supplemental Findings report is included in Attachment 1. This report documents actions taken by the SWMD from December 2016 through May 2017. The SWMD and SCS will provide on-going reporting of all activities related to this Plan through the use of separate memorandums or letter reports.

As this Plan is reviewed and the effectiveness of leachate removal and water quality are evaluated, revisions and amendments to the Plan will be made. Revisions and amendment dates will be documented on the Table of Amendments.

2 LEACHATE REMOVAL ASPECTS

Operational Leachate Levels

Since the original 1984 Operation Permit for the SCLF Phase I through VI disposal areas, there have been several documents that reference different operational head on bottom clay liner system, varying from 12 to 36 inches. The SWMD will request from the FDEP, in a separate document, a permit modification to clarify and establish a maximum operating head over liner depth which will serve as the approved operating level and the ultimate goal for this Plan.

Leachate Levels

During the site investigation completed to-date within the Phase I-VI disposal areas, varying depths of leachate above the approved level have been identified (Refer to Attachment 1 with a listing of initial measured points and supplemental readings and/or additional monitoring points will be added as this Plan develops during the duration of its implementation). The elevated readings have been measured in piezometers (Refer to Attachment 1 for a table of liquid levels,

landfill cross sections, and figure with estimated top of clay). Perched liquid also has been found in the landfill gas (LFG) recovery system and in some condensate traps. The highest levels were measured in the eastern part of Phase I, the central and south portion of Phase II, and the eastern portion of Phase III. Liquid levels within the LFG recovery system wells are significantly different than levels measured in the piezometers installed to specifically measure leachate head over the clay bottom liner. The LFG well system liquids appear to be perched, and are not related to the piezometer liquid levels. The leachate in the gas wells drain very slowly, if at all. This appears to be due to the very dense ash and waste at the base of the gas well. This is a phenomena that is common in many landfills and has been validated in research conducted in Florida landfills by Dr. Timothy Townsend.⁽¹⁾

Because of the areal discontinuity in liquid levels noted in the LFG recovery system, LFG condensate traps, and the piezometers, multiple, temporary dewatering locations will likely be necessary to achieve successful leachate removal and reduction of the head on liner to the Approved Operating Level within a time frame agreed to by the County. To-date the leachate removal actions by the SWMD have included:

- 1. Installation of permanent air-operated pumps in three LFG well condensate traps (CT-1, CT-2, and CT-3) and four LFG extraction wells (EW-38, EW-44, EW-48, and EW-66) in Phase I and Phase II.
- 2. Dewatering of 25 LFG extraction wells was conducted on a one-time basis and was conducted from January 5 through January 27, 2017. This included 15 LFG wells in Phase II.
- 3. Installation of a temporary dewatering trench sump and pump (designated as TPS-2 since it is located in Phase II) in the southeast area of Phase II.

Currently the active total daily liquid removal from No. 1, and 3 above, is approximately 3,300 gallons per day (GPD). Table 1 summarizes the individual liquid volume contributions removed.

Dewatering Point	Approximate Removal Rate (GPD)
LFG EW-38, EW-44, EW-48, & EW-66	
and CT-1, CT-2, CT-3	1,000
TPS-2	2,300
TOTAL APPROXIMATE	
REMOVAL RATE	3,300

Table 1. Summary of Liquid Removal Rates

^{1.} Effect of Perched Water Conditions in MSW Landfills: Considerations for Landfill Operators, Dr. Timothy Townsend

Estimated Leachate Quantity

Based on calculations made by SCS, it is estimated that a total amount of leachate stored above the 30-inch level, roughly within the Phase II area, is approximately 13.5 million gallons. The 30-inch depth was chosen for the calculation based on historical levels and this level is subject to change with the Alternate Procedure to be applied for to establish the Approved Operating Level for the Phase I-VI disposal areas. This quantity does not include leachate perched in the gas wells and any excess leachate created by rainfall that is in excess of that collected in the main leachate sump at PS-B. The key assumptions in this estimate include:

- Potential area with "collectable" leachate = 2,700,000 s.f. (~62 acres)
- Average thickness of perched leachate (above the 30-inch level) = 6.8 ft.
- Percentage overall area that is dry (does not contain appreciable amount of leachate) = 30%
- Percent of remaining volume containing ash = 60%
- Saturated ash does not provide accessible leachate permeability is too low.
- Percent of volume containing "other wastes" = 40%
- Porosity of "other wastes" = 50%
- Fraction of leachate held in pores by capillary action = 30%

For the purpose of establishing leachate removal activities, this volume of liquid was targeted and pumping removal rates for existing and proposed points established in an effort to provide an estimated timeline to the Plan. A total leachate withdrawal rate of approximately 42,000 gallons per day (GPD) was established as a goal to remove the volume within approximately one year. However, given some of the complexity of the landfill dewatering the SWMD has seen to date, the ultimate volume of leachate, removal rates, and ultimately the timeline, could be more or less than that estimated.

3 CURRENT CORRECTIVE ACTION PLAN

Cleanout Installation

The original design of the main leachate collection header of Phases I, II, and III did not include a typical header cleanout point. The SWMD located the leachate collection pipe and constructed a cleanout on the header on the south side of Phase I on or about March 9, 2017. The SWMD then jet cleaned and inspected this LCRS header pipe in Phase I area and results of the inspection indicated the pipe is open and collecting leachate. Several attempts over a period of three weeks were made by the SWMD with large excavations to locate the leachate collection pipe in the Phase II area and one attempt to locate the header in the Phase III area. These excavations have not been successful to-date. Additional excavation in Phase II is scheduled to begin on June 26, 2017, as described in Section 4 below. This more aggressive excavation has two goals, i) to locate the Phase II LCRS pipe and ii) to install a cut-off trench.

Temporary Leachate Collection Sump

The SWMD installed a temporary leachate collection trench and sump on the east side of Phase II. Leachate removed from Temporary Pump (TPS-2) is pumped to the main leachate pump station (MLPS) located north of Phase II. TPS-2 is currently removing an average 2,300 GPD directly from the Phase II disposal area. While installing TPS-2, the gravel trench along the inside perimeter of the berm was found in the location shown on the original design drawings, prepared by CDM Smith dated February 11, 1985, for the Phase I – VI disposal areas. This gravel trench is still functional and conveying leachate to the TPS-2 sump and removal point. This gravel trench is a key feature that will be utilized to withdraw and control leachate head levels along the perimeter of the Phase II disposal area.

Supplemental Leachate Removal

LFG Extraction Well Pumps

Currently the SWMD has installed seven permanent pneumatic pumps in four extraction wells (EW-38, EW-44, EW-48 and EW-66) and three condensate traps (CT-1, CT-2, and CT-3) in the LFG collection system. These pumps are currently removing approximately 1,000 GPD of leachate from the south side of Phase I and Phase II areas.

4 PROPOSED CORRECTIVE ACTION PLAN

The SWMD will execute the corrective action plan and leachate removal activities in four stages summarized as follows. A summary of the total estimated daily leachate removal rates are provided in Stage 2 following this section.

STAGE 1 - Pumping of Gas Wells and Condensate Traps

The SWMD will continue to extract leachate from Condensate Traps CT-1, CT-2, and CT-3, LFG wells EW-38, EW-44, EW-48, and EW-66, and TPS-2.

STAGE 2 - Supplemental Leachate Monitoring and Removal Systems

The SWMD is executing the following leachate removal and mitigation activities:

- 1. Use of GCL fabric to reduce surface water run-in at LFG wells (Planned for the summer of 2017).
- Large diameter leachate dewatering wells. (two wells have been completed as of May 19, 2017)
- 3. A leachate cut-off and drainage trench on the perimeter of Phase II (Planned excavation to start June 26, 2107).
- 4. Additional piezometers to measure leachate head in the eastern part of Phase II. (Two installed as of April 13, 2017)
- 5. Excavation to locate the end of LCRS header pipes in Phases II and III, installation of a permanent clean-out and jet-cleaning of the headers (Planned upon location of headers).

6. In addition, a separate permit modification is proposed to modify the filling sequence to place additional waste within Phases III, IV, V, and VI. This modification will induce settlement in these disposal areas to promote leachate flow away from the Phase II area and toward the sump, PS-B (Minor Permit Modification submitted to FDEP on April 10, 2017.

These are described in more detail in the following section.

GCL Skirts at LFG Wells (Scheduled for Summer of 2017)

To minimize the potential for surface water entering through the landfill extraction wellheads in the Phase II area, a GCL layer will be placed at the surface around the wells and covered with soil and vegetative cover. These GCL skirts will be installed at all extraction wellheads on Phases I-VI.

Dewatering Wells (Completed)

The SWMD installed two, 8-inch diameter (min) vertical leachate removal wells, within two p36-inch diameter boreholes, in the west central part of the Phase II and eastern part of Phase I disposal areas to provide additional liquid removal. Plan and detail sheets of the dewatering wells are included in Attachment 2. These wells were recently installed, and the pump settings are currently being evaluated and adjusted.

Large diameter boreholes with one or multiple pumps have been used successfully to dewater other landfills. SCS and the SWMD considered other leachate removal options and concluded that the well would be the best current choice. Because the landfill is mainly composed of dense, relatively impermeable ash, leachate flow paths and flow rates are difficult to determine. Thus, flow rates and total volume from any dewatering fixture cannot be accurately estimated at this landfill.

The initial data indicates that the dewatering wells are currently pumping approximately 1,300 GPD combined. While the pumps have the capacity to pump at much greater volumes, the slow recharge rate and the low hydraulic conductivity of the waste appears to limit the amount of liquid available to the pumps. In an effort to increase liquid pumping, SCS is currently evaluating the affects that altering pump placement in the wells may have on pumping volumes and liquid levels.

The target combined pumping rate for all dewatering points, including an allowance for downtime of 10%, results in an effective total pumping rate of approximately 42,000 GPD to remove the 13.5 million gallons. Table 2 summarizes the leachate removal points, and the individual removal rates discussed above.

Stage	Dewatering Point	Estimated Removal Rate (GPD)
1	TPS-2, EW-38, EW-44, EW-48, EW-66,	
I	CT-1 and CT-2	3,300
2	New Dewatering Wells DW-1 and DW-2	1,300*
3	Cut-Off Trench and other methods (to be	
3	determined)	37,400
4	Addition methods to increase removal	
4	efficiency to be determined	
	TOTAL PROPOSED GOAL REMOVAL RATE	42,000

*Currently, wells DW-1 and DW-2 are being adjusted to stabilize the pumping of leachate and to minimize collection of sediment from the well installation

Cut-off Trench (Schedule for June 2017)

The SWMD will also install a combination leachate cut-off trench and liquid level monitoring standpipe along the eastern and southern side of Phase II at a depth corresponding to top of the clay (Attachment 3). The cut-off trench will be installed adjacent to the existing gravel trench system along the perimeter berm. A riser pipe at each end of the cut-off wall will allow the SWMD to monitor leachate levels that, if increasing, would alert them to a potential for the leachate to be higher than the elevation of the top of the synthetic liner anchor trench in the berm. In that case, the riser pipe can be used to allow a portable pump suction line to be inserted and the leachate directly removed and the level drawn down before it reaches the top of the berm, and pumping continued until the level begins to recede.

Additional Temporary Piezometers (Completed)

In addition, two temporary piezometers (SB-26 and SB-27) were installed on the eastern side of Phase II, to allow the SWMD to monitor leachate levels and the effectiveness of the removal effects along the east berm. These piezometers will be replaced by monitoring points (riser pipes) along the cut-off trench.

Excavation to Locate LCRS

The SWMD will attempt to locate the header pipes in Phases II and III. If located, a permanent clean-out will be extended through the perimeter berm and the lines jet-cleaned to validate functionality and increase flow capacity. The headers will be inspected with video camera if jetting does not clearly establish increased flow.

Fill Sequence Modification

The filling sequence will be modified to place additional waste within Phases III, IV, V, and VI. This modification will induce settlement in these disposal areas to promote leachate flow away from the Phase II area and toward the sump, PS-B.

STAGE 3 - Leachate Pumping and Level/Water Quality Assessment

As the liquid levels decrease, leachate removal points may be removed from the Plan if pumping points do not appear to be effective in reducing head levels in a specific area. If leachate levels do not decrease, new dewatering points will be added, as necessary in order to maintain the desired pumping rate and or to reduce levels to the Approved Operating Level.

During this Stage 3 period, leachate levels and pumping efficiency may vary and adjustments to the Stage 3 and 4 timeline, methods, and location of leachate removal points, and water quality results will be assessed. Our recommendations will be included in the monthly reports sent to FDEP.

STAGE 4 — Approved Operating Level Stabilization and Completion of the Plan

Upon reducing the leachate level to the Approved Operating Level, the removal of leachate will continue until pumping rates are reduced and levels within Phase I, II, and III are measured at the Approved Operating Level, or less, continually for at least one (1) month This will signify the leachate removal efforts have been effective and will be the start of a period of extended monitoring.

The extending monitoring will be for a one (1) year period, or until the Consent Agreement between the SWMD and FDEP has been satisfied, will be used to determine completion of this Plan.

Upon completion of the removal efforts, a follow-up evaluation report of the LCS will be prepared documenting the results of the Plan and ability of the LCS to maintain the Approved Operating Level. The evaluation will include recommendations on continued operations procedures for the Phase I-VI disposal areas. Procedures may include pumping rates, liquid level monitoring techniques, water quality monitoring, or other procedures as identified during the completion of the Plan. The SWMD will coordinate with FDEP on the evaluation report and any permitting requirements that may be needed for continual operation of the Phase I-VI area.

5 MONITORING AND REPORTING

Temporary Leachate Piezometers

The SWMD has installed 19 temporary piezometers in Phases I-VI. The water levels in these piezometers will continue to be monitored during implementation of this Plan through Stage 4. The SWMD will submit monthly progress reports to the FDEP that document the activities completed during the previous calendar month. These reports will include the preceding monthly leachate pumpage volume and weekly piezometer liquid level readings for the site. The progress report will be submitted to the FDEP by the 15th of each month.

Water Quality Monitoring Wells

The SWMD will continue to collect samples from surficial groundwater monitoring wells TH-20B, TH-38B, TH-66A, TH-67, TH-79, TH-80, TH-81, and TH-82 on a quarterly basis (February, May, August, and November). These samples will be analyzed for sodium, ammonia,

chloride, and total dissolved solids. Field parameters will include temperature, pH, Conductivity, Turbidity, Dissolved Oxygen, and ORP. Results will be submitted to the FDEP within 60 days of completion of laboratory analysis.

Quarterly monitoring of these groundwater monitoring wells will continue for one year or as outlined in Stage 4 of the Plan. At that time, the SWMD will discuss with the FDEP discontinuing quarterly monitoring at these locations.

Quarterly Review of Plan

The SWMD will, at three month intervals, review and evaluate the performance of the activities. This review will include the pumpage rate from dewatering locations, liquid levels in all piezometers, and if modifications are required to ensure leachate levels are dropping and that the system is performing as intended. A status report of the effectiveness and timeline for the Plan after each review period will be provided to the FDEP within 30 days of the review (i.e., before the end of the month in which the review took place).

Long-Term Leachate Monitoring

As outlined in Stage 4 of the Plan, the leachate levels will be monitored for one additional year to confirm that the levels have receded and the Phase I-VI areas are operating as designed and in accordance with the Approved Operating Level. With FDEP approval, following the one year extended monitoring period, the levels will not be monitored at the monitoring locations identified in this Plan.

6 SCHEDULE

A schedule of activities is included in Attachment 4. This schedule includes current and proposed site leachate removal activities and is based on a goal for leachate removal of 42,000 GPD. This time frame estimate is with an understanding that placement and performance of existing and supplemental dewatering wells and other features and leachate removal conditions are optimum, the seasonal effects of weather are minimal, obtaining any necessary governmental approvals in a timely manner, and the dewatering points maintain projected flows. These factors will likely vary during the activities within the Plan.

The intent of this Plan is to reduce leachate head levels down to the Approved Operating Levels based upon pumping information observed during implementation of the Plan.

FDEP will be kept informed of progress of leachate removal, head over liner estimates, water quality results, and schedule updates with reports and data submitted as described in this Plan.

Revision #	Description	Date

Plan Amendments

Attachment 1 Supplemental Findings Report Dec. 2016 – May 2017

SCS ENGINEERS



LIQUID ASSESSMENT MONITORING SUPPLEMENTAL FINDINGS REPORT DECEMBER 2016 - MAY 2017

SOUTHEAST COUNTY LANDFILL LITHIA, FLORIDA

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1 INTRODUCTION

On behalf of Hillsborough County Public Works Department, Solid Waste Management Division (SWMD), SCS Engineers (SCS) is submitting this report to present findings of the liquid assessment monitoring and dewatering activities completed at the Southeast County Landfill (SCLF) located in Lithia, Florida (**Figure 1**). On December 13, 2016, the SWMD submitted to the Florida Department of Environmental Protection (FDEP) a Liquids Assessment Monitoring Finding Report (December 2016 Report) detailing the preliminary results of the ongoing investigation related to elevated groundwater quality parameters at onsite piezometer TH-67 and its possible connection to the leachate liquid levels in the Phase II cell of the landfill. The December 2016 Report also included a series of plans depicting a phased approach to assess and address the liquid levels within Phases I through VI of the SCLF. In an email dated December 16, 2016, the FDEP commented that they had no objections to the approach.

The purpose of this report is to present the strategy, methodology, and results of the liquid assessment and dewatering actions completed at the SCLF since the December 2016 Report. A cut-off date for data included in this report was set at the end of May. However, as explained in the report there are some activities that will continue on. These will be reported to the FDEP in supplemental, but separate update memoranda, or letter reports (see Corrective Action Plan dated June 2017). This report includes recommendations for future course of actions to address the above-mentioned concerns. This assessment uses a sequential and flexible approach that allows the results of the previous phase to be incorporated into the next phase of the project. By implementing this approach, SCS was able to adapt the execution of the field efforts to actual field conditions and modify the approach as needed according to site-specific data. The following presents the results of SCS' and SWMD's field investigation and recommendations for future actions to address the elevated leachate liquids levels detected in Phases I, II, and III of the SCLF.

2 BACKGROUND

In June 2016, the SWMD and SCS initiated an investigation related to elevated groundwater quality parameters at monitoring well TH-67 and its possible connection to the leachate liquid levels in Phase II of the SCLF. The initial investigation consisted of the installation and liquid level measurements in four temporary piezometers (SB-01, SB-02, SB-03, and SB-05) strategically located within Phase II of the SCLF (**Figure 2**). These four temporary piezometers were installed in open/unsealed boreholes to the top of the clay liner. The boreholes were previously used to collect clay samples for geotechnical testing related to sequences of waste fill activities. For ease of reference, these unsealed piezometers will be referred to as "Series-1" piezometers. Additional piezometers discussed later in this report were constructed in a different manner. Results of this preliminary investigation indicated that elevated liquid levels were present in all the piezometers installed.

In response to the liquid in Series-1 piezometers, in November 2016, SCS completed an additional investigation that included liquid level assessment in the landfill gas (LFG) extraction wells (EWs) network and in the temporary piezometers installed in Phase II. Results from this limited investigation are included in the December 2016 Report and revealed the presence of elevated liquid levels in LFG EWs located on Phases I and II of the Landfill. SCS compared the

liquid levels data from the temporary piezometers against the levels observed in the EWs to determine if a direct relationship or pattern existed between the two data sets. The comparison revealed no direct correlation between the two data sets, as there was no discernable pattern into the distribution of the liquid levels across the Landfill. Additionally, a direct correlation between the temporary piezometer and the EW was not possible as none of the EW wells extended to the top of the Phases I-VI clay liner.

SCS also compared the distribution and occurrence of the liquid accumulation in the SCLF EWs network. This comparison showed no evidence of a relationship, as the presence or absence of liquid in the EWs changed across the Phases I-VI area without a discernable pattern.

In response to these findings, SCS completed short-term pumping tests in selected LFG EWs and in all four temporary piezometers. These tests were completed to determine, among other things, liquid levels response, recharge rates, movement of leachate through the ash and the drainage sand in the landfill, and if there was a hydraulic connection between LFG EWs and piezometers. The pumping test results indicated that wells EW-44 and EW-48 located in Phase I sustained pumping rates of up to 5 gallons per minute supporting the idea that pockets of perched leachate might exist at the SCLF.

Pumping rates from the temporary piezometers were not as significant. Liquid level measurements showed a relatively rapid drawdown followed by a relative rapid recharge (except SB-01). The pumping liquid level change in the temporary piezometers behave similar to the response of a natural aquifer. Based on these findings, it was determined that the liquid levels observed in the extraction wells were representative of liquid accumulations trapped in "perched zones" created by the differential compaction of waste material within the landfill.

Given that the temporary piezometers were installed in open boreholes without a seal to prevent the potential downward migration of fluids from "perched liquids" above the screen, it was determined that the liquids levels observed at the temporary piezometers are not representative of true head over liner conditions at the landfill. SCS presented the results of these liquid assessment to the FDEP in the December 2016 Report.

The following sections provide a detailed narrative of the interim liquid removal actions and supplemental liquid assessment efforts taken by the SWMD to expeditiously mitigate and address the apparent elevated liquid concern at the SCLF. These activities, in summary, included:

- 1. Installation of pneumatic pumps in select LFG EWs and LFG condensate traps (completed).
- 2. Cleaning of select LFG EWs to allow dewatering (completed).
- 3. Supplemental liquid removal from select LFG EWs (completed).
- 4. Investigating condition of existing leachate collection and recovery system (initiated).
- 5. Liquid monitoring and supplemental assessment of head over liner (completed).

Additional description and details of these activities provided in the following sections.

3 SUPPLEMENTAL LIQUID REMOVAL ACTIVITIES

Field activities completed at the SCLF were conducted per the December 2016 Report and the Landfill Gas and Extraction Well Dewatering Plan dated December 20, 2016 (**Appendix A**). The following sections present actions completed to date by the SWMD to mitigate and further assess elevated liquid levels at the SCLF.

3.1 INSTALLATION OF PNEUMATIC PUMPS IN EXTRACTION WELLS AND CONDENSATE TRAPS

The purpose of these activities was to initiate dewatering efforts at the landfill at specific existing locations known to contain leachate. For that purpose, the SWMD installed permanent pneumatic pumps in LFG EWs EW-44 and EW-48, between December 21, 2016 and January 5, 2017. Additional permanent pneumatic pumps were installed in EW-38 and EW-66 in April 2017. These four locations were chosen since they exhibited the highest liquid accumulation levels, pumping, and recharge rates during the November 2016 and January 2017 pumping tests. Leachate percolations into the waste can find its way into the traps. Thus, the SWMD also installed pneumatic pumps at existing condensate traps (CTs) CT-1, CT-2 and CT-3 to enhance liquid dewatering efforts at Phases I and II of the SCLF (**Figure 2**).

3.1.1 Methodology

To maximize the pumping capacity at each of the locations mentioned above, the SWMD placed each pneumatic pump near the bottom of the EWs and condensate traps. The pumps are connected to the existing 2-inch diameter airline that is part of the existing LFG collection and conveyance system. The liquid discharge lines associated with these pneumatic pumps are connected to the existing LFG condensate forcemain line that directs flow through a cleanout in Phase V (C-O-5-3) to the leachate collection system. Each pump is equipped with a meter to measure the pumping rate and the amount of liquids removed from each location. Each pump is operated continuously and SWMD personnel monitor their performance to assure proper functioning and efficiency of the recovery efforts in progress. Please note that CT-3 has been dry since the onset of the pumping efforts, therefore no liquids have been removed from this location. The pump will remain in CT-3 to be utilized in the event the liquid level rises during the wet season.

3.1.2 Findings

Active dewatering efforts from these EWs were initiated on December 21, 2016 and are still ongoing. To date (May 31, 2017) the dewatering efforts have recovered approximately 450,000 gallons of liquids. A table with liquid removed from each EW and CT as of May 31, 2017 is included in **Appendix B**. Drawdown data is not available as the EWs are sealed preventing the collecting of water level measurements during active pumping conditions. Of importance is to mention that the amount of water being pumped from these wells is decreasing, which is an indication of the decreasing amount of liquid around the well or condensate trap. An email from SCS with quantities of liquid pumped from these locations is sent to the FDEP on a weekly basis.

3.2 LANDFILL GAS EXTRACTION WELLS CLEANING

During the November 2016 liquid assessment activities, SCS encountered a viscous black residue in LFG EWs EW-64, EW-66, EW-67, EW-69, and EW-71 that prevented the removal of liquids from these wells. The location of these EWs are key to the investigation of liquid in Phase II.

3.2.1 Methodology

In response to these conditions, SCS contracted Layne Christensen Company (Layne) to remove the black residue and rehabilitate the EWs for incorporation into the liquids removal program. The cleaning consisted of two parts, dilution and pumping. Clean water (approximately 300 gallons) was injected into each EW to dilute and breakdown the viscosity of the black residue in the well. The liquids and residue mixture was then extracted using an airlift pump.

3.2.2 Findings

Liquids and black residue removal was completed at EW-66, EW-69, and EW-71. However, liquids could not be pumped out from EW-64 and EW-67. Following the first unsuccessful attempt, these two EWs were treated with a mixture of water and chlorine (ratio of 50 to 1) in an attempt to break down the residue and allow pumping.

For EW-67, this approach was ineffective, as the solution either flowed out of the well screen and into the surrounding tire chips or the amended water mixture was not strong enough to break down the viscosity of the residue. The SWMD may investigate other methods for removing the residue from EW-67.

In the case of EW-64, it was determined that the initial liquid level reading was false, most likely caused by residue on the interior sides of the well creating a false positive reading of the electronic water level meter. Following the initial cleaning, the liquid level inside the well was less than 2-feet; therefore, there was not enough liquid in the well to sustain pumping.

Once EW cleaning efforts were completed, EW-66, EW-69, and EW-71 were incorporated in the dewatering efforts described below. A summary of the findings of the EW cleaning are included with the memorandum in **Appendix C**.

3.3 SUPPLEMENTAL LIQUID REMOVAL FROM LFG EW NETWORK PHASES I - VI

The purpose of these efforts was to remove liquids as expeditiously as possible from the areas with the highest amount of liquid accumulation and measure how quickly and by how much the liquid level recovered. Then, use this information to formulate a plan for the design and installation of a permanent leachate dewatering system. For the EW dewatering activities, SCS equipped two teams of professionals with submersible pumps and associated piping to extract liquids from EW clusters at the landfill. SCS conducted the liquid removal efforts between January 5 and January 27, 2017. Liquid removal activities consisted of pumping from EWs in Phases I-VI that contained liquid levels greater than 2 feet. Following is an overview of the

dewatering activities completed at the SCLF. A copy of the work plan is included in **Appendix A**.

3.3.1 Methodology

Prior to initiating the dewatering efforts, SCS personnel measured the total depth and liquid level at each EW to assess liquid levels and determine which locations met the above-mentioned criteria. The field teams worked in tandem to pump liquid from each EW and used mobile above ground storage tanks (ASTs) operated by the SWMD to containerize the extracted liquids. To maximize liquid pumpage amounts, SCS placed the submersible pump approximately 6-inches above the bottom of the EW and once the pump was securely placed, pumping was initiated.

SCS collected conductivity readings from the liquids being extracted from each well. Pumping activities continued at each EW until a minimal amount of liquid remained in the EWs or until the AST was full. Once full, the ASTs were transported to the onsite Main Leachate Pump Station (MLPS) and the contents discharged into the sump. In several instances and to maximize efficiency in the field, SCS personnel used the time while the SWMD personnel emptied the AST to set up at the next EW location. After completing the first dewatering event, SCS personnel returned the following day to the same well and if sufficient liquid was present, initiated pumping until the well did not appear to recharge. Typically, each EW was pumped four separate times unless there was insufficient recharge. Deviations from the planned four pump cycles are noted in the Dewatering and Liquid Managements Summary memorandum in **Appendix C**.

3.3.2 Findings

The results of these dewatering efforts indicate that 11 EWs in Phase I, 14 EWs in Phase II, and one EW in Phase V exhibited liquid levels greater than 2 feet prior to dewatering. The resulting liquids levels, liquid column, and amount of water removed from these EWs is provided in **Appendix C**. The following is a summary of the collected EW dewatering data by landfill cell phase.

Phase I Extraction Wells

The Phase I EWs with the greatest volume of liquids removed were EW-50, EW-47, EW-45, and EW-49. For instance, SCS removed 3,255 gallons (gals) of liquids from EW-50 and 2,100 gals from EW-47. From EW-45, SCS removed 1,650 gals and from EW-49 1,055 gals of liquids were removed. Other notable wells were EW-46 (660 gals) and EW-56 (385 gals).

Review of the liquid level data collected prior to the first and last dewatering event indicated that the pumping efforts lowered the liquids levels in the EW wells involved in these efforts. For instance, the starting liquid level at EW-50 on January 13, 2017 was 43.0 ft below top of casing (btoc). On January 19, 2017, the liquid level at EW-50 was 45.0 ft btoc. This represents a water level drop of 2.0 ft from the removal of approximately 3,255 gallons of leachate. Other Phase I EWs with notable diminished liquid levels were EW-49 (1.7 ft) and EW-45 (1.4 ft) and EW-47 (0.9 ft). In general, a

similar pattern was apparent at all the Phase I EWs wells pumped during these efforts. During this time, no significant rain fell, thus limiting the creation of new leachate and possibly altering the liquid level in each EW.

Phase II Extraction Wells

The EWs in Phase II with the greatest volume pumped and best recharge were EW-30, EW-38, and EW-66. Specifically, SCS removed 2,650 gals from EW-30; 1,900 gals from EW-66; and 650 gals from EW-38. Other notable EWs include EW-32, EW-70, and EW-71. EW-38 did not produce as much volume, but was consistent. Both EW-70 and EW-71 pumped well during both pumping events while EW-29, EW-31, EW-33, EW-34, EW-34, and EW-35 were pumped only once as the water liquid level dropped to 2 feet or lower.

Review of the liquid level data collected prior to the first and last dewatering event indicated that the pumping activities successfully lowered the liquids levels in the EW wells involved in these efforts. For instance, the starting liquid level at EW-30 on January 11, 2017 was 43.5 ft btoc. On January 19, 2017, the liquid level at EW-30 was 46.0 ft btoc. This represents a water level drop of 2.5 ft from the removal of approximately 2,650 gallons of leachate. Other Phase II EWs with notable diminished liquid levels were EW-69 and EW-39.

Phases III, IV, V, and VI Extraction Wells

With the exception of EW-21, the EWs in Phases III, IV, V, and VI did not contain adequate liquid to be pumped. EW-21 was pumped once, but did not recharge adequately to allow additional pumping.

Summary

In total, 26 EWs were pumped at least once during these dewatering efforts and a total of approximately18,170 gallons of leachate were removed from the landfill. The highest volume of liquids were removed from EW-50, EW-30, EW-47, EW-66, EW-45, and EW-49 located in Phase I and Phase II. The Dewatering and Liquids Management Summary memorandum (**Appendix C**) contains recommendations for additional permanent pneumatic pump installations. Following this effort, permanent pneumatic pumps were installed in EW-38 and EW-66 to assist in the removal of liquid on the east and north sides of Phase II.

This effort reinforced the fact that there are pockets of perched liquid in Phases I and II that are not representative of leachate head over liner. The fact that we were able to drawdown the levels slightly at each EW is an indicator that the liquid can be removed by use of pumps in the EWs.

4 LEACHATE COLLECTION AND RECOVERY SYSTEM INVESTIGATION

As part of the on-going investigation of liquid, the SWMD conducted explorations to locate and assess the condition of the Leachate Collection and Recovery System (LCRS) in Phases I, II, and III. The header pipes for these areas were not intended to extend to cleanouts, per the original design plans. The following sections provide detail narrative of the action taken by the SWMD to assess this concern.

4.1 TRENCH EXCAVATION

Between February 1 and February 7, 2017, the SWMD staff and Waste Management Inc. (WMI) conducted trench exploration activities to locate the perimeter LCRS header pipe for Phases I, II, and III of the SCLF. The approximate trench excavation locations are shown in **Figure 3**.

4.1.1 Methodology

The purpose of the exploration was to locate the LCRS headers without damaging the LCRS header pipe, perimeter hypalon liner, and the bottom clay liner. The terminus of the leachate header pipes were scaled from the construction plans and then that location transferred to coordinates that were staked in the field, at each phase (I, II, and III), by a land surveyor (**See Figure 3**). This was to provide a gage for planning the extent and number of excavations for locating the pipe. The pipe was estimated to be approximately 15 feet below the top of the landfill and thus other techniques, such as ground penetrating radar (GPR) were not believed to be useful. A GPR survey was initially made to locate the header in Phase II but was not successful. At each location, the trenches were extended approximately 50 feet in length on each side of the survey marker for a total length of 100 feet. **Appendix D** contains the report prepared by SWMD detailing these activities. To accomplish this goal, the following methodology was used:

- SWMD excavated a 4-foot wide trench 25 feet inside the solid waste boundary, away from the edge of the perimeter hypalon liner.
- The excavation extended to the top of the sand layer and the top 12 inches of sand was removed. The existing cover soils were stockpiled for reuse and the waste removed was hauled to the active working phase of the Landfill.
- Using the excavator bucket teeth, the operator scraped the upper 12 inches of the remaining sand layer with the expectation of locating the upper portion of the LCRS gravel trench (assuming the total sand layer is 3 feet thick and the gravel trench around the pipe is 2 square feet).
- After the trench exploration was completed, the trench was backfilled with sand to about 2 feet from the surface. Stockpiled clayey cover soil was used for the remaining 2 feet.

4.1.2 Findings

<u>Phase I</u>

The trench in Phase I was completed on February 1, 2017. The trench was located in the middle of the southern footprint of Phase I. The trench was 108 feet long by 15 feet deep. The drainage sand layer appeared moist and the waste was dry. At the trench location, the waste consisted of a 2-foot thick layer of class I MSW with a large quantity of agricultural plastic material. No ash was observed. The LCRS gravel trench was surveyed, cleanout pipes installed, and the header pipe jet cleaned and inspected. The installation of the cleanout riser pipe, jet cleaning, and inspection are described in Section 4.2.

<u>Phase II</u>

The trench in Phase II began on February 7, 2017. Two trenches were excavated in Phase II. The first trench (2A) was located in the middle of the eastern footprint of Phase II. This trench was 142 feet long by 15 feet deep and the drainage sand appeared moist and the waste was dry. At this location, the waste type consisted of a 2-foot layer of class I MSW with a large quantity of agricultural plastic material. No ash was observed. The LCRS gravel trench was not located and this trench was backfilled.

The second trench (2B) was located in the southeast portion of the eastern footprint of Phase II. This trench was 100 feet long by 15 feet deep. The drainage sand was saturated and the waste was wet. At the trench location, the waste consisted of a 3-foot layer of Class I MSW with a large quantity of agricultural plastic material. No ash was observed. A possible location of the LCRS gravel trench was located, however, it could not be confirmed due to standing leachate in the trench.

On February 10, 2017, the SWMD installed a temporary sump with vacuum assisted diesel pump to remove leachate from this location. This location is referred to as Temporary Pump Station 2 (TPS-2) (See Figure 4). The trench and sump were backfilled. Information on leachate removal (pumpage) from TPS-2 is provided in the Corrective Action Plan document.

Phase III

The trench in Phase III was completed from February 2, 2016 through February 6, 2017. The trench was located in the northwest corner of the northern footprint of Phase III. The trench was 190 feet long by 20 feet deep. The drainage sand appeared moist and the waste was dry. At the trench location, the waste consisted of a 6-foot layer of class I MSW with a large quantity of agricultural plastic material. Ash was observed mixed with the plastic material. The LCRS gravel trench was not located and the trench was backfilled. If as-built information with differing information is found, the SWMD may attempt to locate the Phase III LCRS by trenching further into the landfill. However, at this time, there does not appear to be perched liquid in Phase III.

4.2 PHASE I CLEANOUT INSTALLATION, CLEANING, AND INSPECTION

Trenching activities conducted by the SWMD in February 2017 located the LCRS header pipe along the south side of Phase I. Once located, a cleanout pipe was connected to the header line to allow access for high-pressure water jet cleaning and future maintenance and inspection of the pipe. The Phase I cleanout location is shown on **Figure 5**. Additional cleanouts were installed to access the perimeter pipe in the east and west directions. A cross section and detail of the cleanout are shown on **Figure 6** and **Figure 7**, respectively.

4.2.1 Jet Cleaning (Methodology)

The SWMD contracted Florida JetClean to clean and inspect the Phase I LCRS header pipe. On March 9, 2017, Florida JetClean arrived at the SCLF and with a high-pressure water equipment, jet cleaned the LCRS from three different access points: Phase 1 LCRS header access south (newly installed), Phase I perimeter pipe access east, and Phase I perimeter pipe access west. Appendix E provides the Florida JetClean report regarding the jet cleaning.

4.2.2 Video Inspection (Findings)

Once the jet cleaning was completed, the header and perimeter pipe lines were video-inspected to determine the condition of the pipes. Video inspection showed that the pipes were in good condition with no visible evidence of breakage or leakage. Some debris, mostly consisting of sand, was present inside the main header pipe (8-inch diameter) line and no blockage was observed. **Appendix E** provides the Florida JetClean and SCS reports regarding the video inspection.

5 LIQUID MONITORING AND SUPPLEMENTAL ASSESSMENT

5.1 PIEZOMETER INSTALLATIONS

The purpose of these activities was to determine a true head over the clay liner in areas of Phases I-VI at the SCLF. For that purpose, SCS provided oversight during the installation of 19 piezometers (2 shallow and 17 deep) strategically located across Phases I, II, III, IV and VI. These will be designated "Series-2 piezometers." The installation of these piezometers is necessary, as the construction of the temporary piezometers (Series-1) do not prevent the downward migration of "perched liquids" intersected above the temporary piezometer screen (if any). Therefore, liquid levels in Series-1 piezometers may not be representative of true head over liner conditions at the SCLF. Installation of the "Series-2" piezometers were completed to more accurately measure head-on-liner. Tierra Inc. (Tierra) completed the drilling activities between January 23, 2017 and April 28, 2017. **Figure 2** shows the locations of the Series-2 piezometers.

5.1.1 Methodology

Drilling activities were conducted using the hollow stem auger drilling technique. At each borehole, a 2-inch diameter by 2-foot long split spoon sampler was used to collect continuous

core samples of the landfill material from approximately 10 feet above the projected top of clay depth to the top of clay. The split spoon containing the cored material was retrieved to the surface and examined by SCS personnel to describe the composition of the landfill waste layers, determine the thickness of the landfill drainage sand layer, and to estimate the depth of the top of clay liner.

5.1.2 Waste Description, Drainage Layer, and Depth to Clay Findings

Atop the waste is an 18- to 24-inch layer of intermediate cover soil overlain by sod in all areas of the investigation, with the exception of the active filling area in Phase I (SB-25D and SB-28D). The description of the cored (waste) material collected during the drilling activities indicated that the landfill is generally composed of intermixed layers of waste, sand (daily cover soil), and ash that extend to the top of the drainage sand layer. The waste material is mostly composed of fabric, paper, wood fragments, as well as plastic and metal pieces. The intermixed layers of waste, sand, and ash varied in thickness but in general ranged between six and 12-inches.

In general, the thickness of drainage sand layer in Phase I, II, III and IV ranged between 3 and 6 feet with some exceptions. Depth to the top of clay also varied depending on the boring location across the phases of the landfill. For instance at Phase I, the depth to the top of the clay liner was encountered at approximately 90 feet below ground surface (ft-bgs). The top of clay liner at Phase II was encountered between 63 and 69 ft-bgs, and at Phase III it was observed between 78 and 87 ft-bgs. At Phase IV and Phase VI the top of clay was observed between 78 and 85 ft-bgs. Descriptions of the cored material are provided in **Appendix F**. These clay elevations are, in general, within limits anticipated by SCS through the historic use of clay settlement graphs developed by Ardaman for use in developing the original landfill fill sequence.

5.1.3 Piezometer Installations

Each deep borehole was converted into piezometer at the top of the clay liner, with the screen intersecting a minimum 2-foot continuous section of the drainage sand layer. The deep piezometers were constructed of a 2-inch diameter polyvinyl chloride (PVC) pipe consisting of a 2-foot section of 0.010-inch horizontal slotted, Schedule 40 PVC well screen threaded to a solid PVC riser extending approximately 3 feet above surface. A PVC end cap was connected to the bottom of each screen to provide a sump for sediments. In most instances, the PVC end cap is set below the top of clay.

As part of these activities, SCS also installed shallow piezometers SB-19S and SB-23S that were paired with SB-19D and SB-23D, respectively. These shallow piezometers were installed in the waste section of the landfill and approximately 5 feet above the drainage sand layer in order to measure the hydraulic gradients. The shallow piezometers construction was similar to the deep piezometers except that the shallow wells were equipped with 5-foot screens instead of 2-foot screens. The shallow piezometers SB-19S and SB-23S were installed to approximately 78 ft-bgs and 80 ft-bgs, respectively. The pairing of a shallow piezometer with a deep piezometer and locating these clusters close to an existing LFG EW was made to confirm the initial observation that liquid in the gas EWs, as observed by a shallow piezometer, is essentially "perched". Although the liquid may vary slowly drain out of the well, the liquid is not hydraulically connected to nor the same liquid as that in the deep piezometer. Findings and conclusions that confirm this observation are found in Section 5.2.

At each boring location, the annular space between the borehole wall and the piezometer screen was filled with 20/30 graded silica sand from the bottom of the borehole to at least 1-foot above the top of the piezometer screen. A nominal 1-2 foot thick layer of fine sand followed by a 2-3 foot layer of bentonite chips was placed above the filter sand layer to seal the horizon between the landfill drainage sand layer and the landfill ash waste layer and to prevent the downward migration of cement grout into the screened portion of the well. During installation, frequent measurements were made with a weighted tape to allow for proper placement of the annular materials (sand pack, fine sand, and bentonite chips) inside the annular space.

The remaining annular space above the bentonite chips was sealed to the surface by pumping bentonite cement grout through a tremie pipe. Piezometer construction logs are included in **Appendix F.** Upon completion, the cement grout in each piezometer was allowed to set for at least 48 hours, and the piezometer was later developed using a submersible pump.

5.2 LIQUID LEVEL OBSERVATIONS

Liquid level measurements for the newly installed piezometers were initiated the third week of February and are still ongoing. Peavey & Associates (Peavey), a Professional Land Surveyor licensed in the State of Florida, surveyed the top of casing and ground surface elevation of the newly installed piezometers. The collected surveyed data information was tied in vertically relative to the 1929 National Geodetic Vertical Datum (NGVD) and the horizontal coordinates transferred to the base map developed for the SCLF site (**See Figures 8. 9, and 10**). Results of the survey are included in **Appendix G**.

5.2.1 Methodology

SWMD and SCS personnel collected liquid level measurements from the Series-1 and Series-2 piezometers to establish liquid level trends across the different phases of the landfill. Depth-to-liquid measurements were collected using an electronic water-level indicator, and the surveyed top of casing (TOC) was used as the measuring point. A relative head over liner measurement was calculated by subtracting the recorded liquid elevation from the top of clay elevation. The depth to liquid measurements and calculated head over liner levels are included in **Appendix H**.

5.2.2 Findings

The liquid levels data collected from the Series-2 piezometers indicated that the highest head over liner levels were observed in piezometers located in Phase I (SB-25D) and Phase II (SB-15D and SB-16D) of the landfill. Figures 8, 9, and 10 show the liquid levels in the piezometers and cross sections.

Initial measurements obtained in February 2017 from Phase I piezometer SB-25D showed a head over liner level of more than 10 feet while in Phase II, piezometers SB-15D and SB-16D showed a head over liner level of almost 10 feet and nine feet, respectively. Please note that since February 2017, weekly liquid level data have showed a steady decrease in head over liner levels in almost all the Phase II piezometers. For instance, at piezometer SB-15D the head over

liner level has decreased 2.6 ft since late February 2017 and at SB-16D, the liquid level decreased 2.9 ft during the same period. This drop in liquid levels at the Phase II well is likely due to the dewatering actions currently ongoing by the SCLF and the lack of precipitation during this period of the dry season, as confirmed by rainfall records at the landfill.

The highest head over liner levels in piezometers located in Phase III, IV and VI are 2.3 feet or less. Additionally, no liquid accumulation was observed in shallow piezometers SB-19S and SB-23S.

SCS compared the liquid levels observed in the unsealed Phase II temporary wells (Series 1 piezometers SB-1 through SB-5) against the head over liner levels observed in Series-2 piezometers in Phase II to determine whether there is a correlation between the two. The comparison showed a significant difference in liquid accumulation levels between Series-1 and Series-2 and if the combination of liquid dewatering activities and normal gravity drainage into the LCRS is reducing head over liner.

For instance, since February 2017 temporary piezometer SB-1 has steadily shown a liquid level of more than 10 ft. Piezometer SB-15D (Series-2), which is the closest piezometer to SB-01, has shown not only a decreasing trend but currently there is a 3 foot difference in liquid levels between the two points. Similarly, since February 2017 the liquid level at SB-3 (Series-1) has remained at least eight feet higher than the liquid level observed at Phase II piezometer SB-24D (Series-2) which the closest permanent piezometer to SB-3. This difference in liquid accumulation between the temporary and the permanent piezometers indicates that perched liquids from areas above the temporary piezometers screen are migrating down through the unsealed borehole providing a liquid elevation that is not representative of actual head over liner levels at the Landfill.

5.3 ADDITIONAL SERIES-1 PIEZOMETERS

On April 13, 2016, the SWMD installed two additional piezometers (SB-26 and SB-27) on the southeast side of Phase II. From May 1 to May 2, 2017 SCS installed two piezometers (SB-29 and SB-30) on Phase I and Phase II. These four piezometers are constructed similar to other Series-1 piezometers. Their construction and purposes are listed below.

5.3.1 Methodology

Similar to other drilling activities, these boreholes were conducted using the hollow stem auger drilling technique. A split spoon sampler was used to collect continuous core samples of the landfill material from approximately 10 feet above the projected top of clay depth to the top of clay. The split spoon containing the cored material was retrieved to the surface and examined to describe the composition of the landfill waste layers, determine the thickness of the landfill drainage sand layer, and to estimate the depth of the top of clay liner.

SB-26 and SB-27

The SWMD installed piezometers SB-26 and SB-27 in order to better define the liquid level along the eastern slope of Phase II. These two piezometers are located between SB-05 and the eastern containment berm near TH-67.

SB-29 and SB-30

Prior to the installation of leachate dewatering wells, two borings (SB-29 and SB-30) were drilled at the proposed locations to determine the depth to top of clay and to install temporary piezometers. These piezometers will be used to measure the depth of perched liquid prior to and during pumping. Boring logs are included in **Appendix F**.

5.3.2 Piezometer Installation

SB-26 and SB-27

The depth of cover soil was approximately 2 feet thick at both SB-26 and SB-27. Boring SB-26 consisted of waste from 2' to 23.5' bgs and drainage sand from 23.5' to 26' bgs. The top of clay is 26' bgs. Boring SB-27 consisted of waste from 2' to 12.5' bgs and drainage sand from 12.5' to 14.5' bgs. The top of clay is 14.5' bgs.

The bottom of the piezometers are set at 25.6' bgs and 15.6' bgs at SB-26 and SB-27, respectively. The 10-foot screen is not sealed in the drainage sand layer.

SB-29 and SB-30

The depth of cover soil was approximately 2 feet thick at both SB-29 and SB-30. Boring SB-29 consisted of waste from 2' to 81.5' bgs and drainage sand from 81.5' to 86.5' bgs. The top of clay is 86.5' bgs. Boring SB-30 consisted of waste from 2' to 61' bgs and drainage sand from 61' to 67.5' bgs. The top of clay is 67.5' bgs.

The bottom of the piezometers are set at 87.5 ft bgs and 68.5 ft bgs at SB-29 and SB-30, respectively. The piezometers were constructed of a 2-inch diameter polyvinyl chloride (PVC) pipe consisting of a 10-ft section of 0.010-inch horizontal slotted, Schedule 40 PVC well screen threaded to a solid PVC riser extending approximately 3 feet above surface. A PVC end cap was connected to the bottom of each screen to provide a sump for sediments. In most instances, the PVC end cap is set below the top of clay. The screen is not sealed in the drainage sand layer.

5.3.3 Findings

Peavey surveyed the TOC and ground surface elevation of these four piezometers. Results of the survey are included in **Appendix G**. As with the other piezometers, this survey data was used to determine head over liner. Liquid level data is included in **Appendix H**.

SB-26 and SB-27

The liquid levels data collected on May 26, 2017 indicate approximately 4-feet and 2-feet of head over liner at SB-26 and SB-27, respectively.

SB-29 and SB-30

The liquid levels data collected on May 26, 2017 indicate approximately 11-feet and 6-feet of head over liner at SB-29 and SB-30, respectively. These levels are expected to lower once the dewatering wells are pumping.

5.4 TEMPORARY MONITORING WELLS

Based on recommendations from the FDEP, the SWMD completed the installation of three new temporary groundwater monitoring wells designated TH-80, TH-81, and TH-82 near monitor well TH-67. These new monitoring wells will be used to monitor shallow groundwater quality parameters east of TH-67.

5.4.1 Methodology

Tierra installed these shallow wells in March 2017, under the supervision of SWMD personnel. These wells are located east of TH-67 (See Figure 3). Borings for these wells were completed using 6-1/2" hollow stem augers. Boring and well installation logs are included in Appendix I.

The wells were constructed of a 2-inch diameter polyvinyl chloride (PVC) pipe consisting of a 10-foot section of 0.010-inch horizontal slotted, Schedule 40 PVC well screen threaded to a solid PVC riser extending approximately 3 feet above surface. A PVC end cap was connected to the bottom of each screen to provide a sump for sediments.

At each boring location, the annular space between the borehole wall and the well screen was filled with 20/30 graded silica sand from the bottom of the borehole to at least 1-foot above the top of the piezometer screen. A nominal 1-foot thick layer of fine sand was placed above the filter sand layer to prevent the downward migration of cement grout into the screened portion of the well. The remainder of the annular space above the fine sand was filled with cement grout. During installation, frequent measurements were made with a weighted tape to allow for proper placement of the annular materials (sand pack and fine sand) inside the annular space. A concrete pad was placed at the ground surface with three bollards surrounding the protective steel casing at each well.

TH-80

TH-80 is approximately 50-feet east of TH-79. The bottom of the well is approximately 15 feet below grade.

TH-81

TH-81 is approximately 50-feet east of TH-67. The bottom of the well is approximately 14 feet below grade.

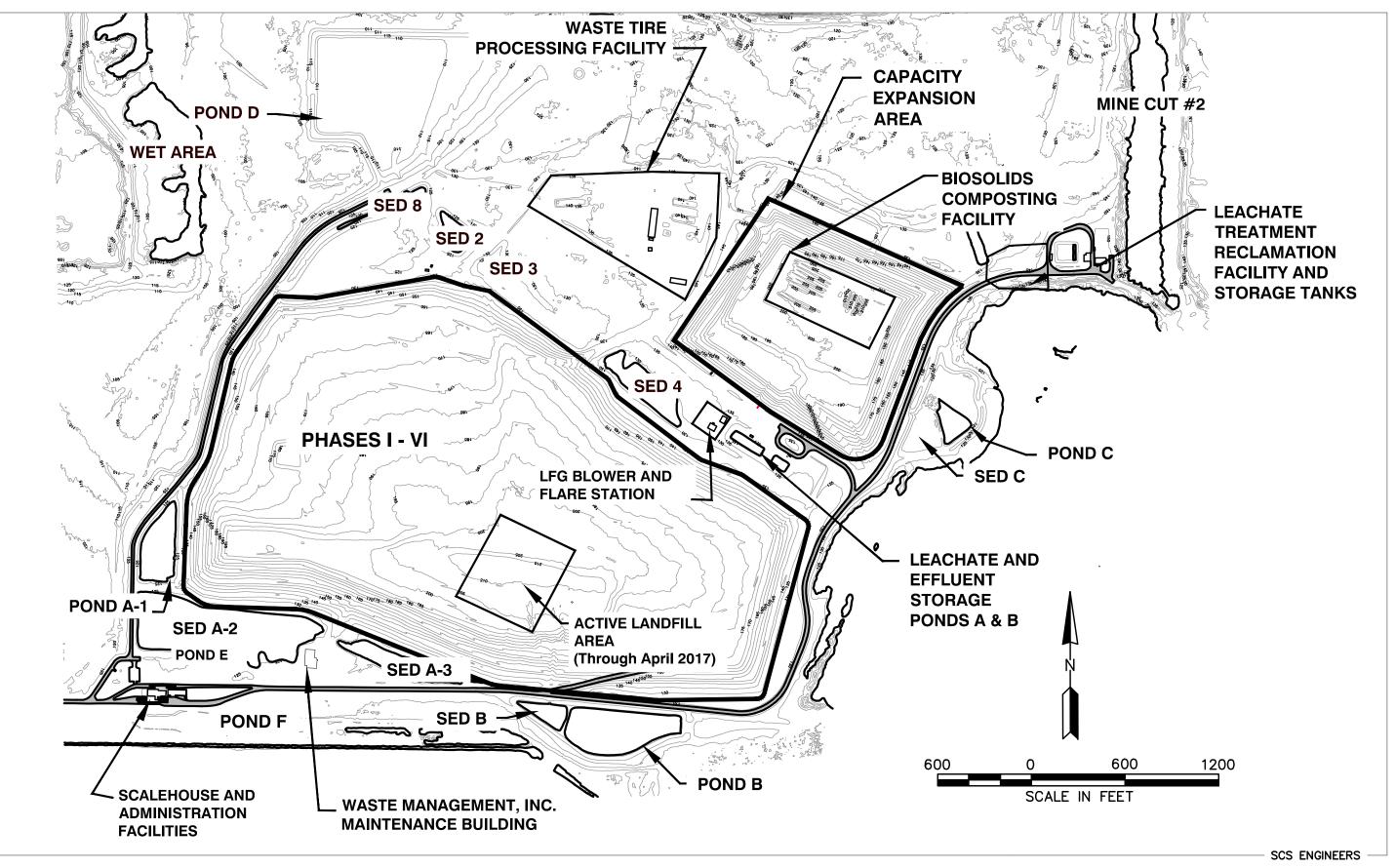
TH-82

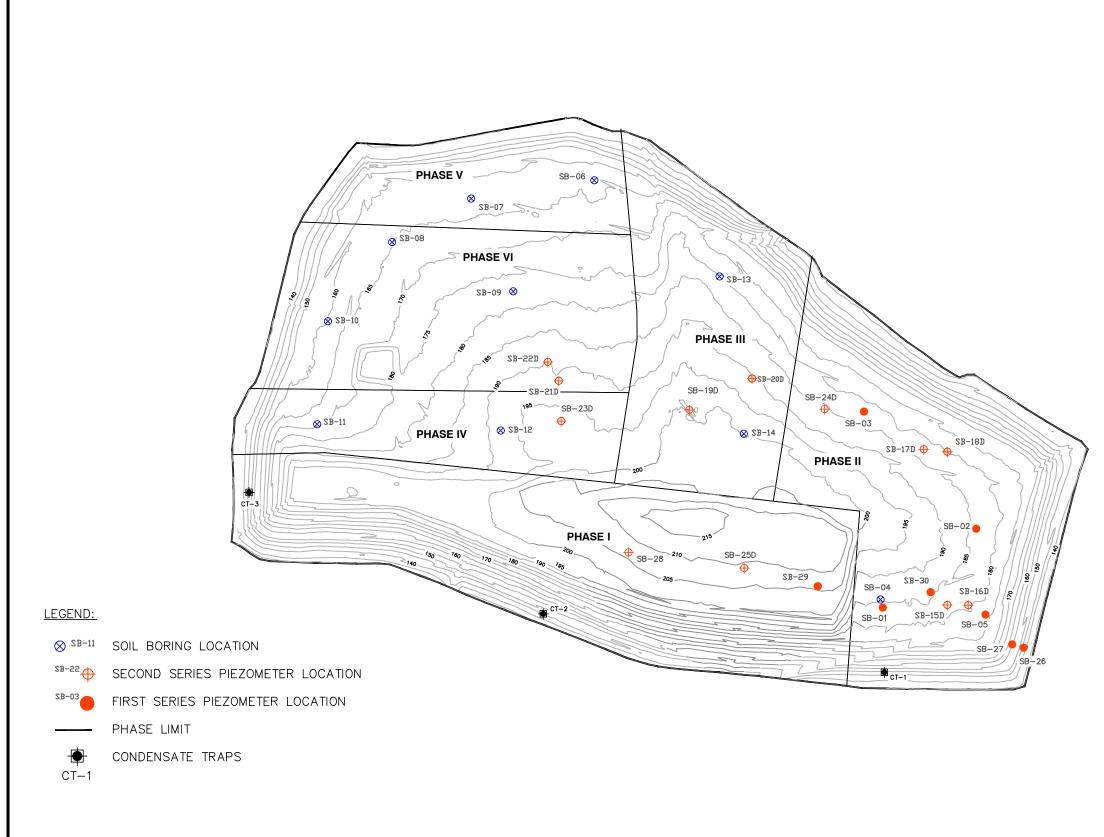
TH-82 is on the east side of the landfill perimeter road, approximately 200-feet northeast of TH-67. The bottom of the well is approximately 15 feet below grade.

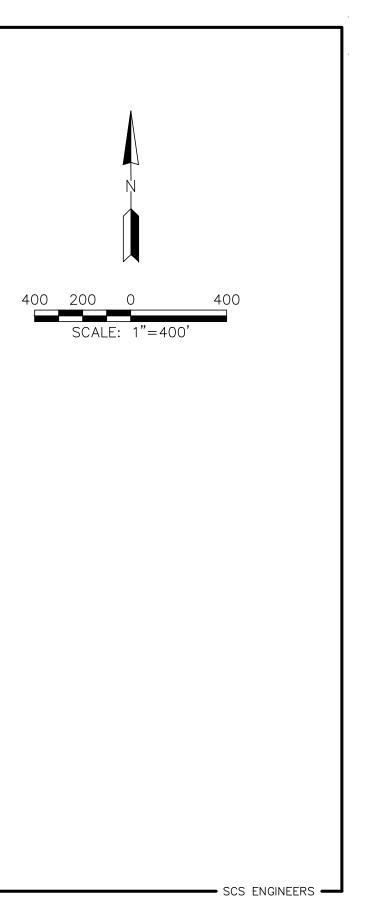
5.4.2 Findings

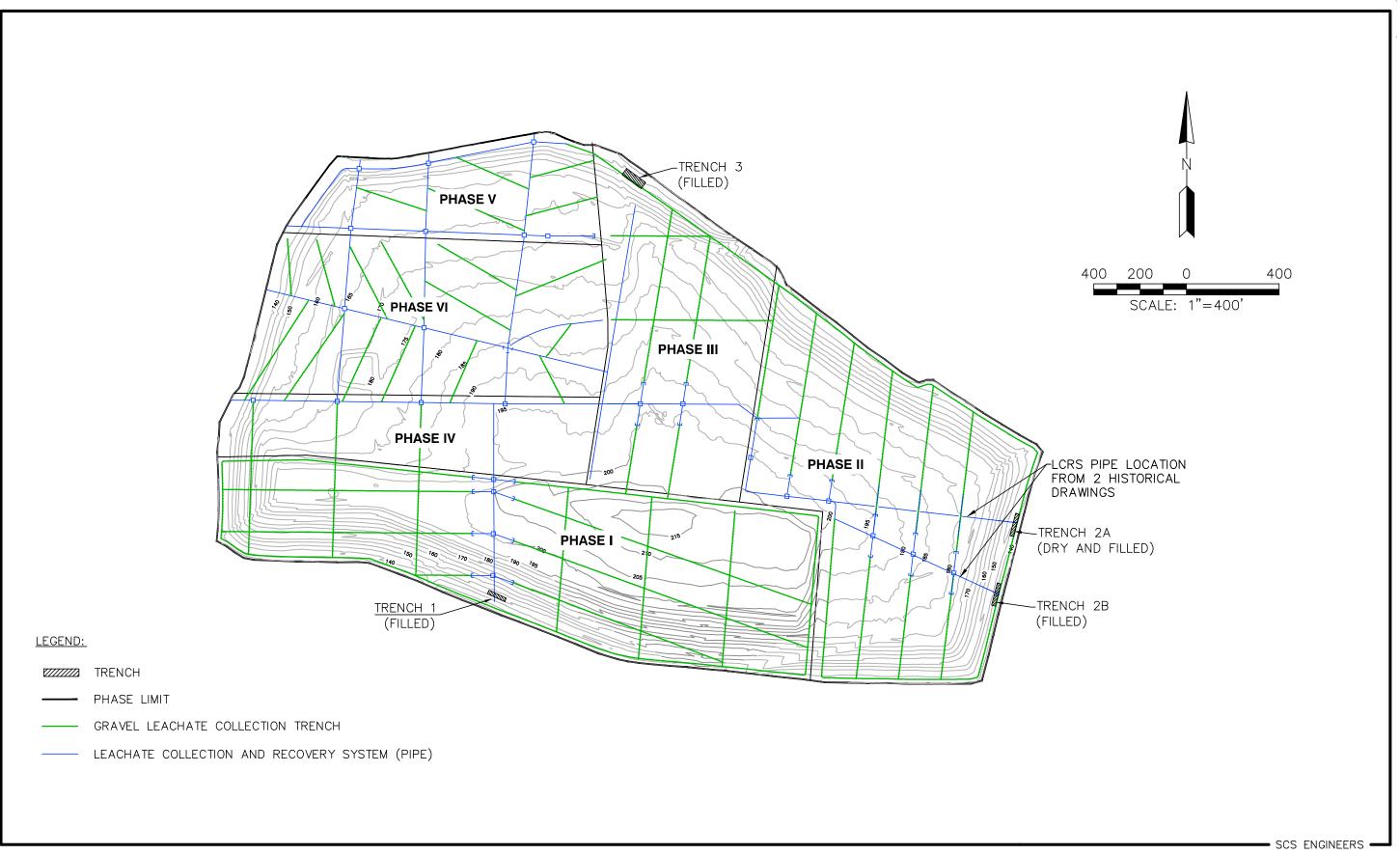
Peavey surveyed the TOC and ground surface elevation of these three monitoring wells. Results of the survey are included in **Appendix I**. Sampling of these temporary monitoring wells will be conducted during the monthly supplemental sampling events. Results of the water quality monitoring will be reported to the FDEP as part of the on-going assessment monitoring plan.

FIGURES

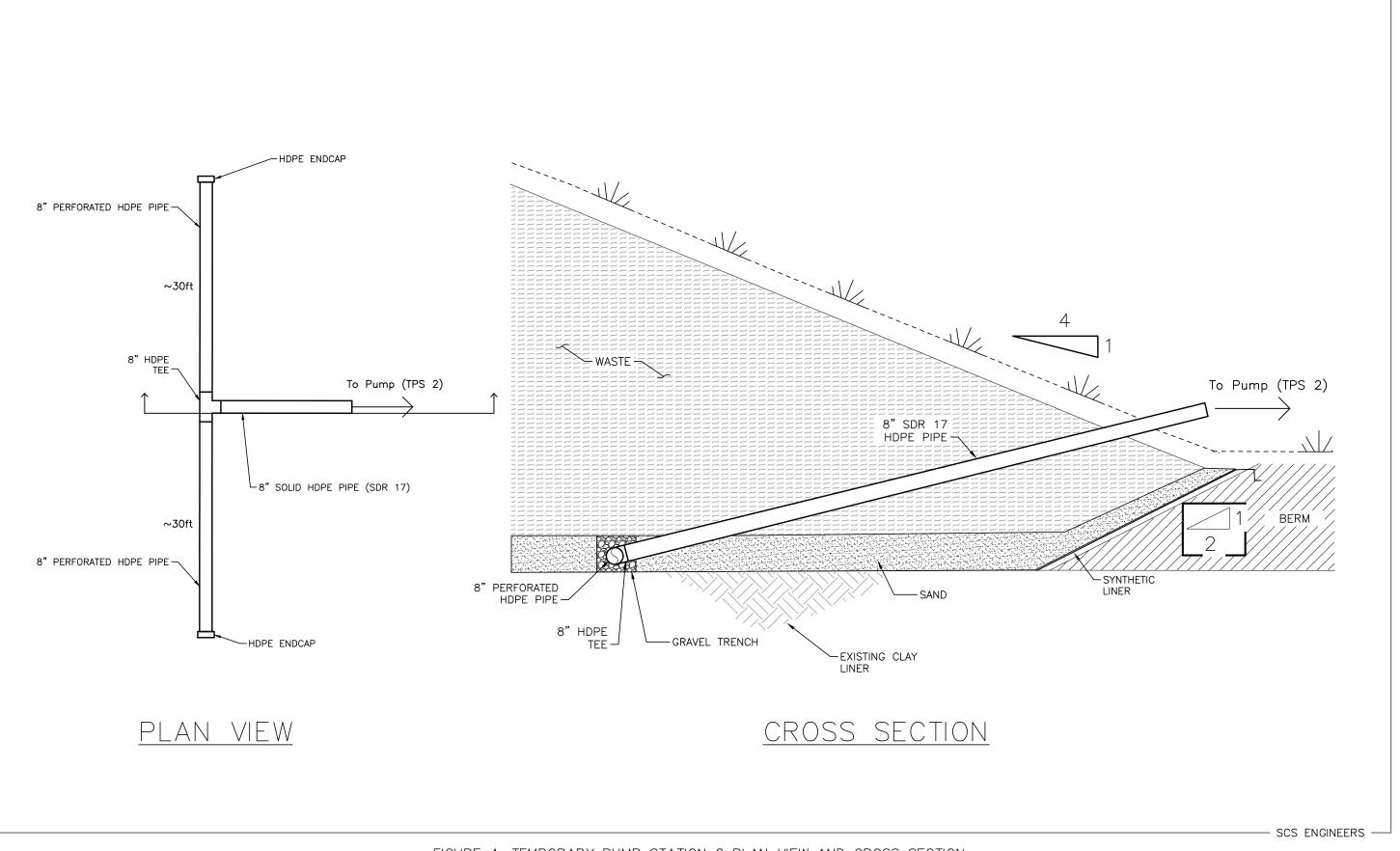


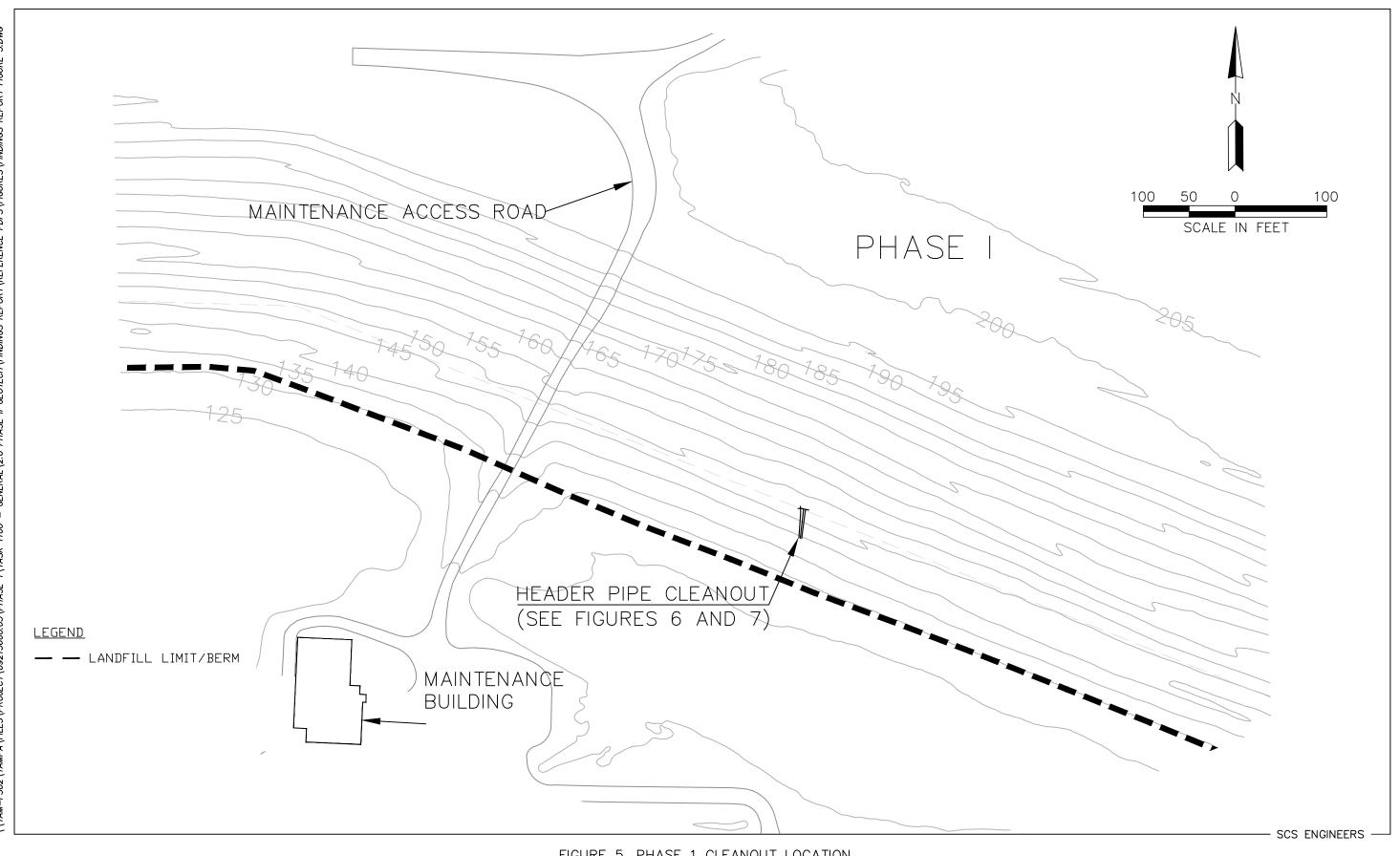


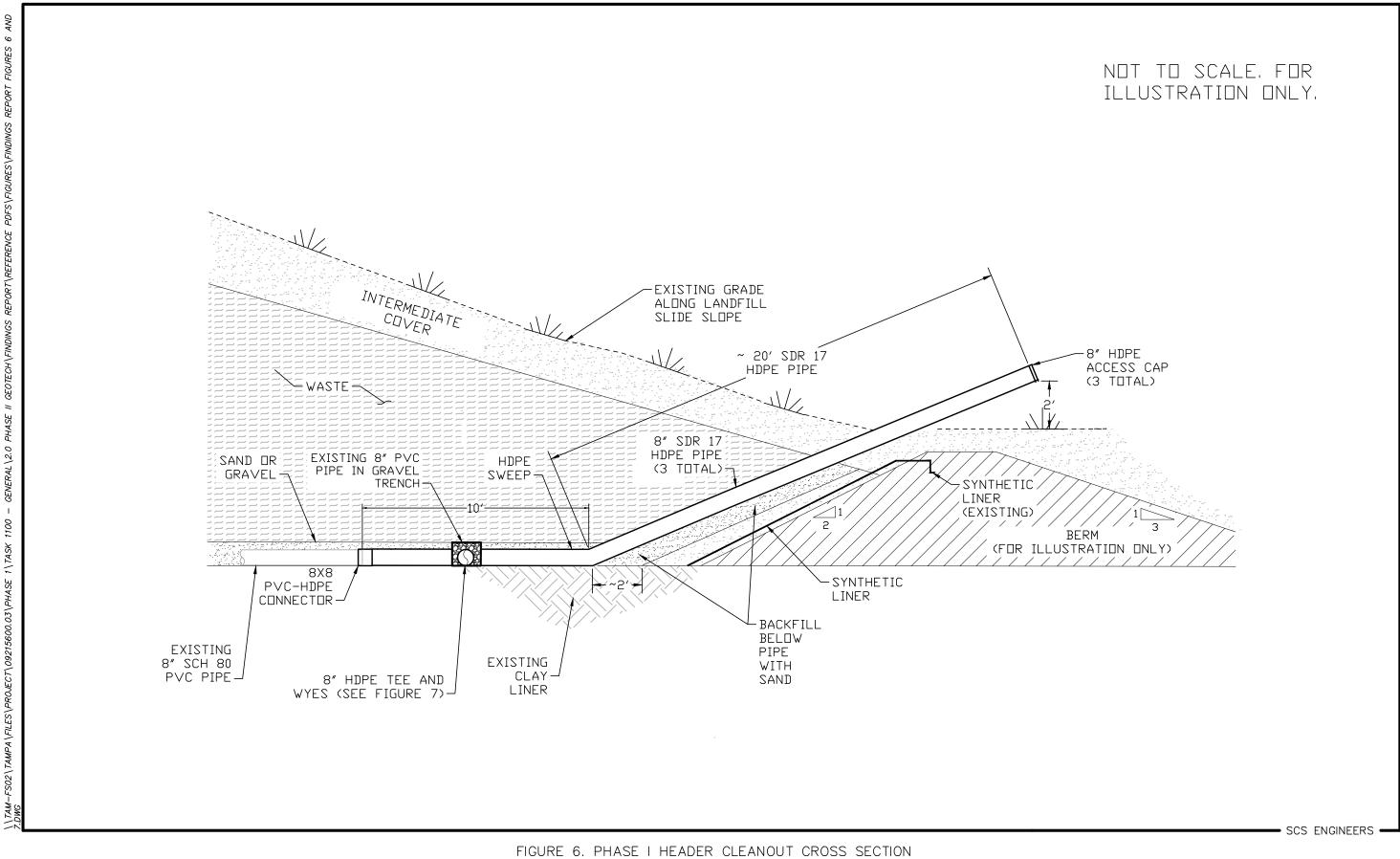




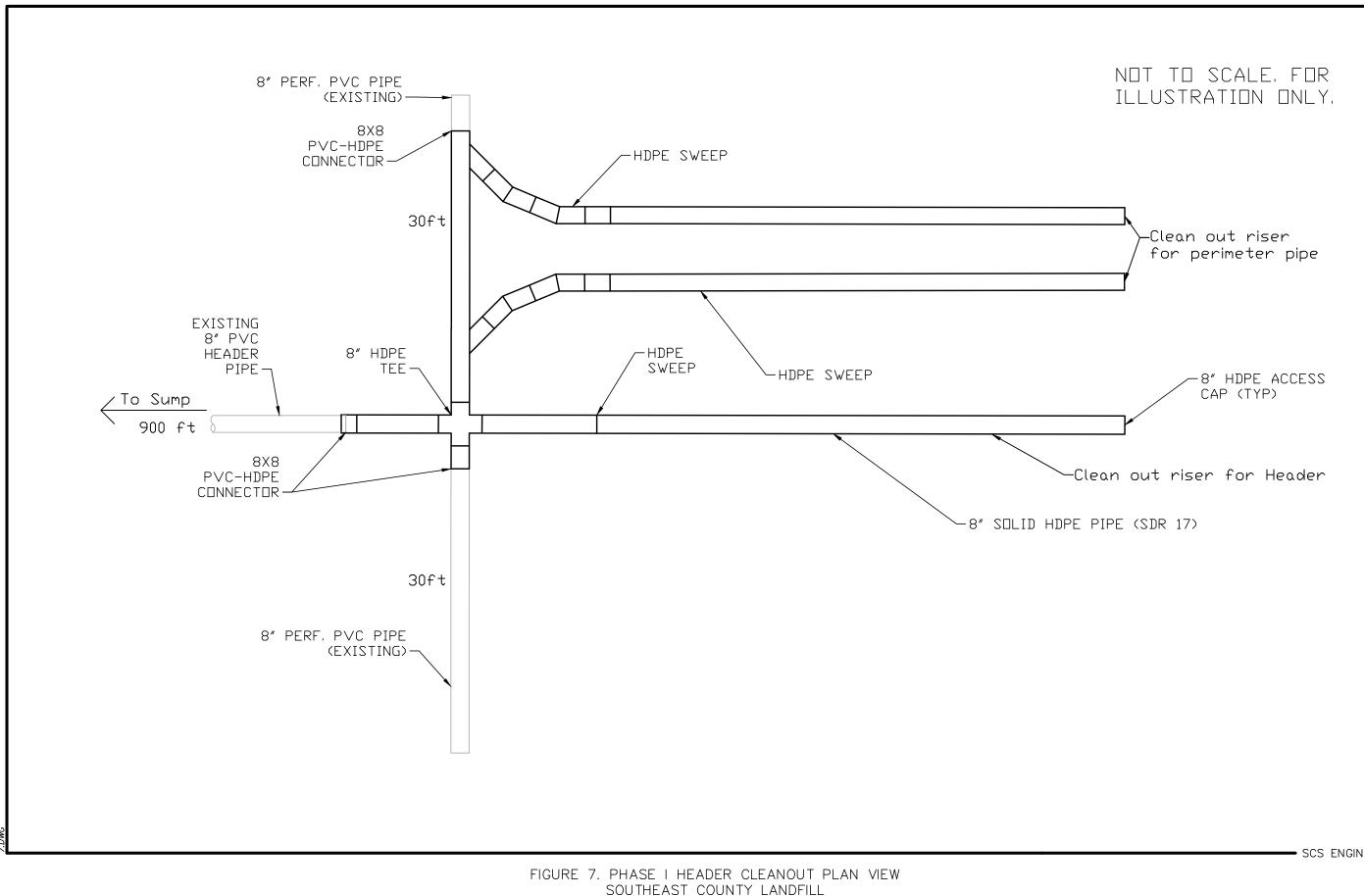
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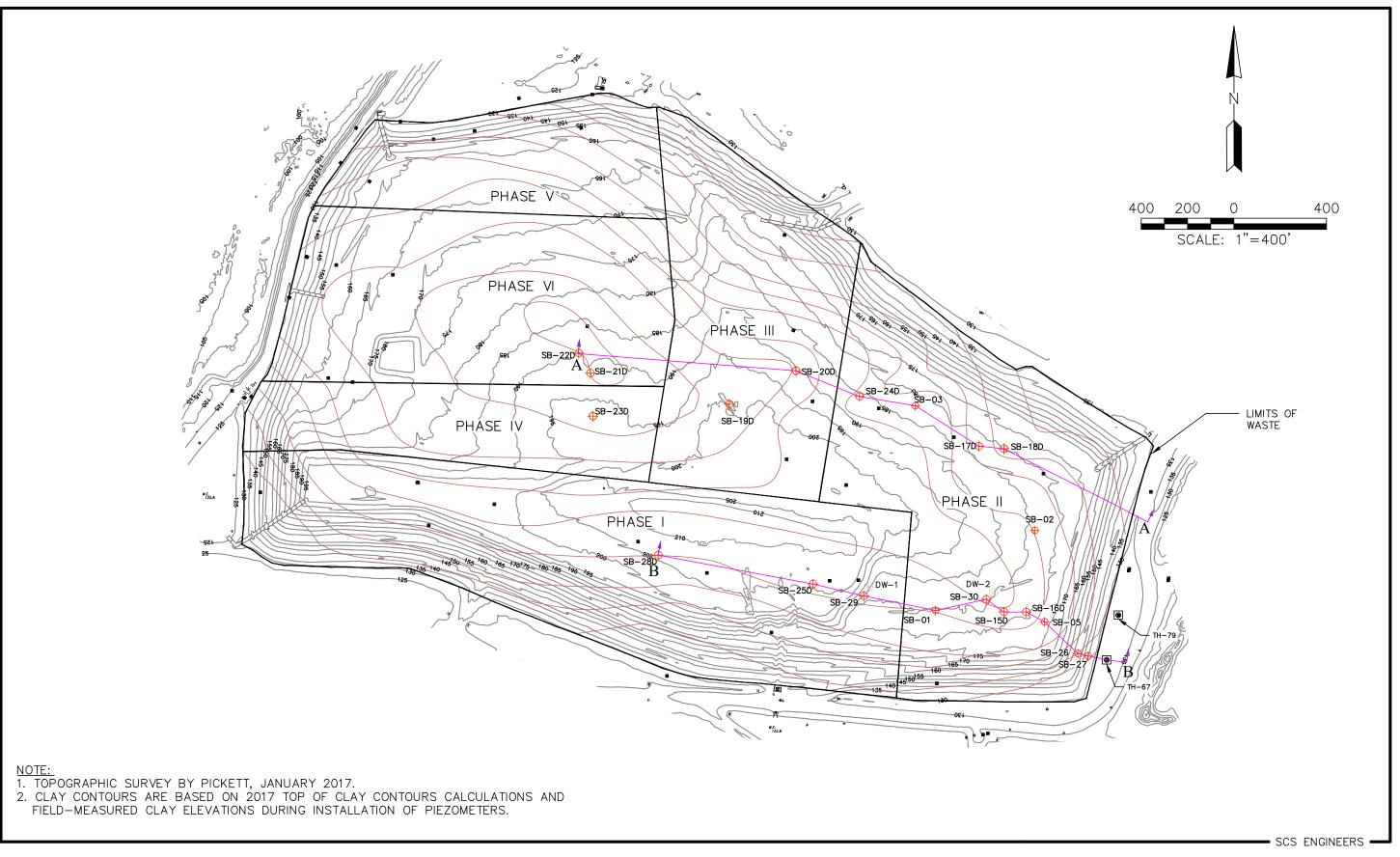
HASE I HEADER CLEANOUT CROSS SECTION SOUTHEAST COUNTY LANDFILL JUNE 2017

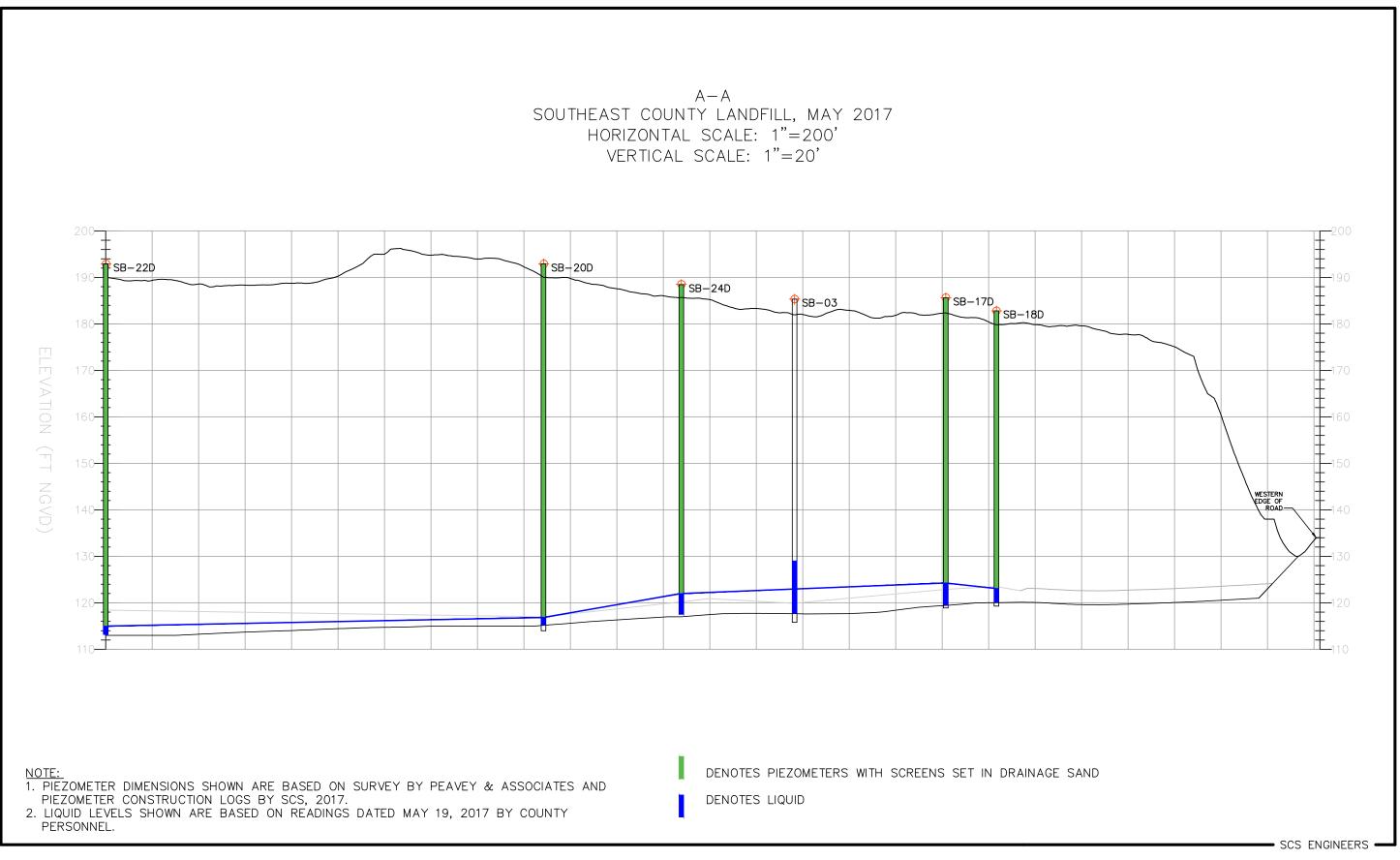


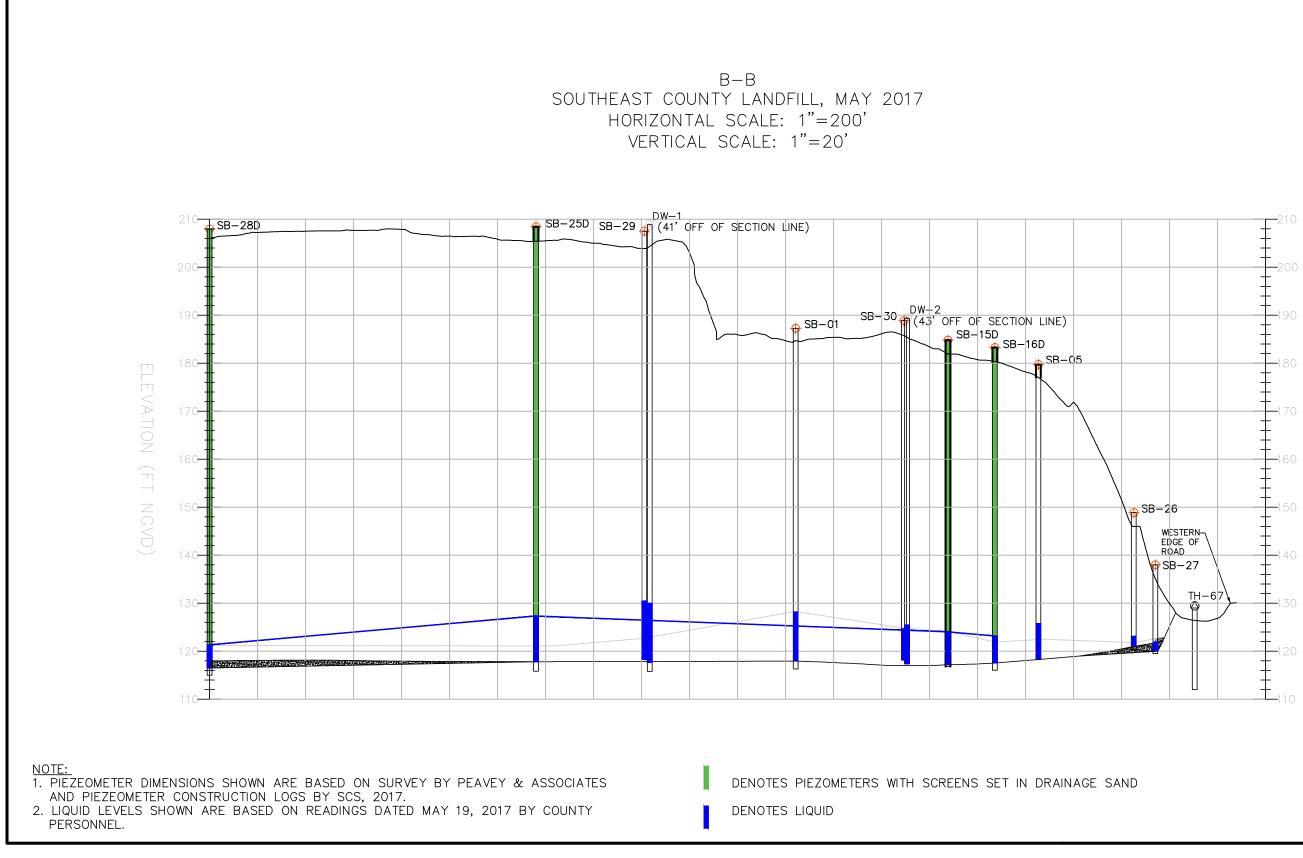
JUNE 2017

AND 9

- SCS ENGINEERS







Appendix A LFG EW Dewatering Plan December 20, 2016 4041 Park Oaks Blvd. Suite 100 Tampa, FL 33610-9501 813 621-0080 FAX 813 623-6757 www.scsengineers.com

SCS ENGINEERS

December 20, 2016 File No. 09215600.03

MEMORANDUM

- TO: Mr. Larry E. Ruiz, S.C., Manager Landfill Operations Hillsborough County Solid Waste Division Mr. David S. Adams, P.G., Environmental Manager Hillsborough County Public Utilities Department
- FROM: Mr. Bruce J. Clark, P.E., SCS Engineers Mr. Robert B. Curtis, P.E., SCS Engineers Mr. Robert L. Westly, P.G., RL Westly, PLLC

SUBJECT: Summary of Southeast County Landfill LFG EW Dewatering Plan

This memo summarizes a proposed initial dewatering plan for the Southeast County Landfill (SCLF). We have prepared this plan as a result of exploratory studies that indicate varying liquid levels in the landfill, which may, or may not, represent leachate head over liner. The intent of the dewatering plan is to promptly reduce the liquid levels and provide an approach for assessing how best to control liquid buildup in the future.

SCLF DEWATERING PLAN

The dewatering plan is proposed to be conducted in two phases as summarized below:

- Phase 1 Install permanent dewatering pumps in landfill gas extraction wells (LFG EW's), EW-44 and EW-48 because of their relatively high production rate, then dewater all other existing LFG EW's in a staged approach.
- Phase 2 (if necessary) Install supplemental, dedicated dewatering wells in the landfill, repeat dewatering of LFG EWs, and/or install permanent pumps in selected LFG EW's.

Phase 1

Equipment and Logistics

- Selected LFG EW's on the SCLF will be dewatered where recorded liquid level depths in the EW wells have exceeded 24-inches in the in the most recent water level readings. Refer to the Attachment 1. The 24-inch criterion is due to the head-over-intake operating requirements for the submersible dewatering pump.
 - a. SCS will provide a crew of two professionals to set-up/break-down the equipment, operate the dewatering pumps, and collect data. The Hillsborough County Solid Waste Management Division (SWMD) will supply the portable tank and periodically provide a tanker for emptying



the portable tank and taking the pumpage for final disposal in Leachate Treatment and Reclamation Facility (LTRF).

- b. LFG EW's will be dewatered singly or in clusters of two, as logistics permit. In order to dewater as quickly as possible, LFG EW's will be preferentially dewatered in clusters, as practical. See **Attachment 1** for locations of LFG EW's to be dewatered in clusters.
- c. The discharge of the dewatering pumps where two LFG EW's are simultaneously dewatered will be manifolded with a 1-inch or 1-1/2-inch diameter discharge line laid on the landfill. The discharge from the pumps will be directed into a portable tank.
- d. Field data will be collected in each well during dewatering and will include the following parameters:
 - i. Starting liquid level during each dewatering cycle (two dewatering events per day).
 - ii. Number of dewatering cycles and date(s) dewatered.
 - iii. Approximate time required to dewater each cycle.
 - iv. Total quantity of liquids pumped (total in aggregate)
 - v. Physical characteristics (once, grab sample during dewatering): pH, conductivity, color.
 - vi. Final liquid level during each dewatering cycle.
- 2) The SCLF will be dewatered in multiple stages. There are seven proposed stages covering 36 existing LFG EWs. See **Attachment 1** for locations of each dewatering stage.

Stage 0

1. SWMD will install permanent pneumatic-controlled pumps in LFG EW-44 and EW-48, and in Condensate Trap (CT-1).

Stages 1 through 7

- 1. See Attachment 1 and Table 1 on the following page for summary of dewatering stages. For the remaining stages 1 through 7, the SCS will use temporary submersible pumps to dewater LFG EW's until they recharge to less than 24-inches of liquid, i.e. 24-inches above the end cap of each LFG EW perforated pipe. We believe that three to five consecutive dewatering cycles will be necessary to fully dewater a well over a period of about three to five days (one cycle per day), assuming no significant rainfall infiltration events.
- 2. Liquid levels in all LFG EW's will be lowered to below the berm elevation.

Table T. Dewalering Slages												
Stage	Well(s)	Stage	Well(s)									
	EW-44		EW-49									
0	EW-48	4	EW-50 & EW-51									
	CT-1	4	EW-52 & EW-53									
	EW-38 & EW-39		EW-55									
1	EW-40 & EW-41		EW-2									
I	EW-45	F	EW-56									
	EW-46 & EW-47	5	EW-12									
	EW-35		EW-15									
2	EW-33 & EW-34		EW-21									
Z	EW-31 & EW-32	,	EW-27									
	EW-29 & EW-30	6	EW-65									
	EW-61		EW-64									
3	EW-63		EW-66									
3	WE-68	7	EW-67									
	EW-70		EW-69									
			EW-71									

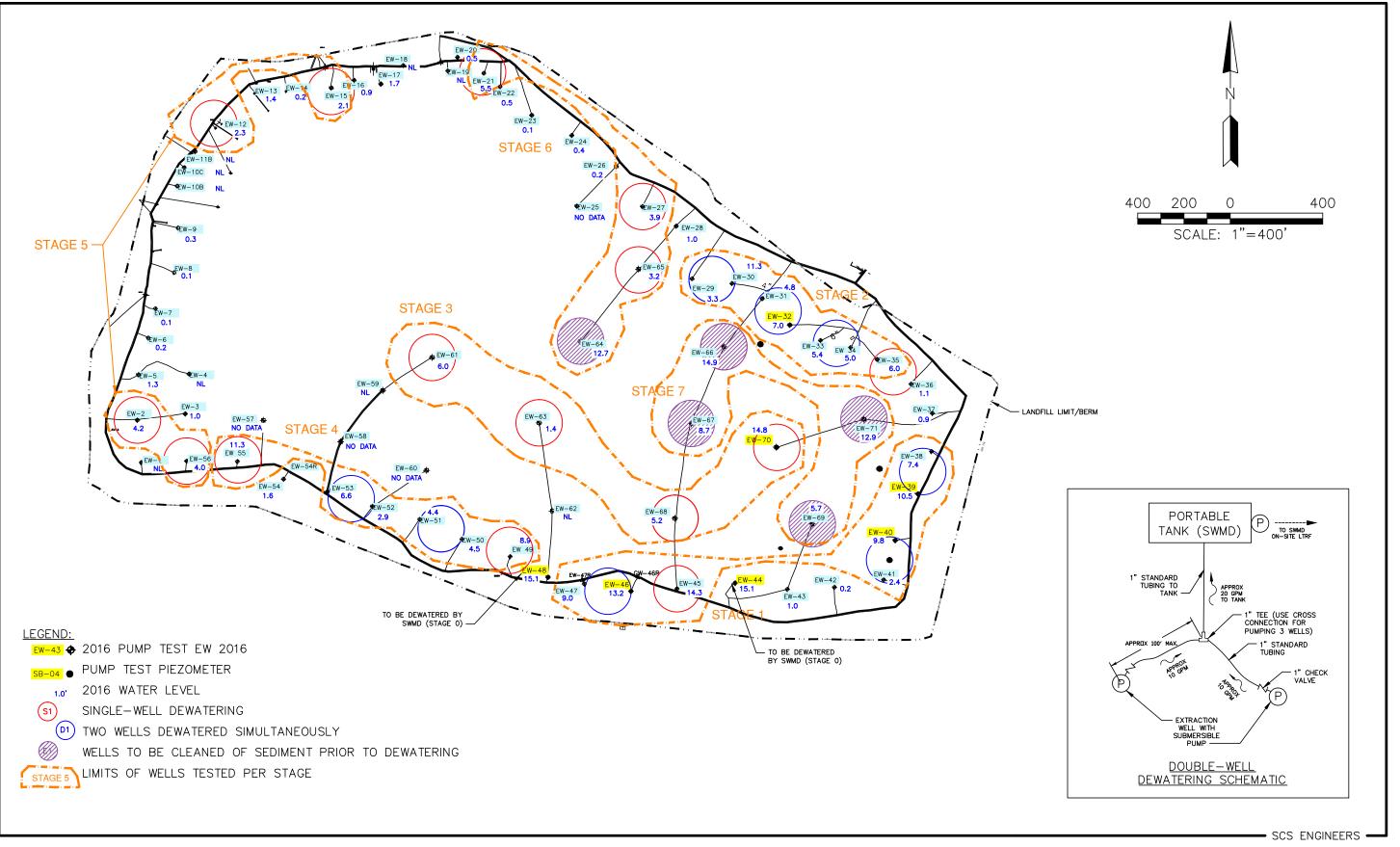
Table 1. Dewatering Stages

3) Schedule

- a) We assume that four dewaterings (whether a single EW or double cluster) can be can be accomplished in one day, if the following is available: two field personnel, four submersible pumps, and two tanks (two dewater simultaneously in two different locations in a stage). It is estimated that each dewatering of an LFG EW well will take approximately four hours to complete. This rate is based on prior field experience pumping the LFG EW's at SCLF.
- b) According to our estimates, the dewatering plan can be completed in approximately four weeks, if operations are conducted on a typical Monday Friday, 10-hour-day, schedule, without any unforeseen delays, and the conditions in the preceding paragraph a) are met.

Phase 2

The need for Phase 2 of the dewatering plan is to be determined after results of Phase 1 dewatering have been reviewed by the SWMD and the FDEP. Phase 2, if required by the FDEP, could likely involve supplemental, dedicated dewatering wells in areas where LFG EW's do not provide adequate coverage, and possibly another round of temporary pump dewatering in some LFG EWs and/or permanent dewatering pumps installed in some of the existing LFG EW's.



Appendix B EW and CT Pneumatic Pump Discharge Table

		Landfil	l Gas Eextr	•	pendix B and Conde	ensate Trap	Dewatering			
				Daily and V	Veekly Sum	mary	-			
				Southeast	County Lar	ndfill				
									WEEKLY	
	CT-1	CT-2	CT-3	EW-38	EW-44	EW-48	EW-66	All	TOTAL	Daily Av
DATE	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gpd)	(gal)	(gpd)
12/21/2016	0	0	0	0	988	537	0	1,525		
12/22/2016	0	0	0	0	754	433	0	1,187		
12/23/2016	0	0	0	0	1,016	568	0	1,584		
12/24/2016	0	0	0	0	0	0	0	0		
12/25/2016	0	0	0	0	165	91	0	256		
12/26/2016	0	0	0	0	1,526	745	0	2,271		
12/27/2016	0	0	0	0	710	500	0	1,210		
12/28/2016	0	0	0	0	1,192	500	0	1,692		
12/29/2016	0	0	0	0	854	468	0	1,322		
12/30/2016	0	0	0	0	824	449	0	1,273		
12/31/2016	0	0	0	0	0	0	0	0	8,024	1
1/1/2017	0	0	0	0	231	124	0	355	0,024	
1/2/2017	0	0	0	0	1,483	730	0	2,213		
1/3/2017	0	0	0	0	823	422	0	1,245		
1/4/2017	0	0	0	0	893	470	0	1,363		
1/5/2017	2,004	0	0	0	799	470	0	3,224		
1/6/2017	2,004	0	0	0	791	421	0	1,732		
1/7/2017	0	0	0	0	0	427	0	1,752	10 122	1
	806	0	0	0	280	139	0	-	10,132	1
1/8/2017			-	-			0	1,225		
1/9/2017	761	0	0	0	584	1,451	-	2,796		
1/10/2017	0	0	0	0	0	0	0	0		
1/11/2017	4,435	0	0	0	1,722	117	0	6,274		
1/12/2017	2,341	0	0	0	897	652	0	3,890		
1/13/2017	2,173	0	0	0	808	551	0	3,532		
1/14/2017	812	0	0	0	290	247	0	1,349	19,066	2
1/15/2017	0	934	0	0	0	0	0	934		
1/16/2017	2,884	584	0	0	1,386	1,133	0	5,987		
1/17/2017	2,610	89	0	0	914	789	0	4,402		
1/18/2017	2,700	106	0	0	871	747	0	4,424		
1/19/2017	2,068	260	0	0	635	601	0	3,564		
1/20/2017	2,569	336	0	0	777	714	0	4,396		
1/21/2017	0	0	0	0	0	0	0	0	23,707	3
1/22/2017	973	430	0	0	259	266	0	1,928		
1/23/2017	3,074	164	0	0	1,305	1,113	0	5,656		
1/24/2017	2,030	173	0	0	737	615	0	3,555		
1/25/2017	1,737	488	0	0	666	623	0	3,514		
1/26/2017	1,680	469	0	0	646	642	0	3,437		
1/27/2017	1,531	250	0	0	608	473	0	2,862		
1/28/2017	1,664	87	0	0	608	401	0	2,760	23,712	3
1/29/2017	1,664	77	0	0	608	401	0	2,750		
1/30/2017	808	0	0	0	647	386	0	1,841		
1/31/2017	2,139	36	0	0	776	412	0	3,363		
2/1/2017	1,887	62	0	0	661	434	0	3,044		
2/2/2017	1887	62	0	0	661	434	0	3,044		
2/3/2017	2992	626	0	0	959	684	0	5,261		
2/4/2017	2992	626	0	0	1109	685	0	5,412	24,715	3
2/5/2017	0	020	0	0	0	005	0	0	,, 15	
2/6/2017	1164	351	0	0	643	370	0	2,528		
2/7/2017	+011 0	434	0	0	579	439	0	1,452		
2/8/2017	6303	434	0	0	770	449	0	7,956		
2/8/2017 2/9/2017	8443	434	0	0	686	449	0	9,989		

		Landfil	l Gas Eextr				Dewatering			
					Veekly Sum					
				Southeast	County Lar	ndfill	-		-	
									WEEKLY	
	CT-1	CT-2	CT-3	EW-38	EW-44	EW-48	EW-66	All	TOTAL	Daily A
DATE	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gpd)	(gal)	(gpd)
2/10/2017	7597	382	0	0	516	355	0	8,850		
2/11/2017	9119	322	0	0	645	443	0	10,529	41,304	5
2/12/2017	9119	322	0	0	645	443	0	10,529		
2/13/2017	9208	0	0	0	813	444	0	10,465		
2/14/2017	9731	0	0	0	1178	452	0	11,361		
2/15/2017	9807	0	0	0	886	445	0	11,138		
2/16/2017	9233	0	0	0	712	404	0	10,349		
2/17/2017	7652	0	0	0	552	342	0	8,546		
2/18/2017	9223	1	0	0	543	399	0	10,166	72,554	10
2/19/2017	9223	1	0	0	543	399	0	10,166	,	
2/20/2017	9480	0	0	0	516	424	0	10,420		
2/21/2017	9836	0	0	0	578	427	0	10,841		
2/22/2017	9142	0	0	0	595	421	0	10,041		
2/22/2017	4816	83	0	0	580	421	0	5,975		
2/23/2017 2/24/2017	4816	32	0	0	480	496	0	5,975		
2/24/2017 2/25/2017	3677	52 0	0	0	480	368	0	4,504	57,909	8
			-	-			-		57,909	C
2/26/2017	3677	0	0	0	459	368	0	4,504		
2/27/2017	1580	2	0	0	439	418	0	2,439		
2/28/2017	1574	0	0	0	481	447	0	2,502		
3/1/2017	1667	158	0	0	504	455	0	2,784		
3/2/2017	2182	364	0	0	429	515	0	3,490		
3/3/2017	1327	168	0	0	201	329	0	2,025		
3/4/2017	1327	168	0	0	201	329	0	2,025	19,769	2
3/5/2017	1327	168	0	0	201	329	0	2,025		
3/6/2017	1392	358	0	0	330	326	0	2,406		
3/7/2017	1635	803	0	0	519	422	0	3,379		
3/8/2017	1424	133	0	0	458	367	0	2,382		
3/9/2017	1680	205	0	0	510	418	0	2,813		
3/10/2017	2090	366	0	0	543	420	0	3,419		
3/11/2017	2289	268	0	0	585	382	0	3,524	19,948	2
3/12/2017	2289	268	0	0	585	382	0	3,524	, -	
3/13/2017	2625	13	0	0	647	346	0	3,631		
3/14/2017	2039	287	0	0	501	350	0	3,177		
3/15/2017	1356	476	0	0	453	306	0	2,591		
3/16/2017	1018	409	0	0	385	268	0	2,080		
3/17/2017	1018	0	0	0	443	336	0	1,807		
3/18/2017	1028	195	0	0	524	452	0	2,601	19,411	2
3/18/2017	1430	195	0	0	524	452	0	2,601	19,411	4
3/20/2017	917	282	0	0	400	229	0	1,828		
		467								
3/21/2017	1599		0	0	487	409	0	2,962		
3/22/2017	1618	412	0	0	510	335	0	2,875		
3/23/2017	1327	411	0	0	452	299	0	2,489		
3/24/2017	1622	313	0	0	608	322	0	2,865	10.005	-
3/25/2017	1739	0	0	0	298	370	0	2,407	18,027	2
3/26/2017	1739	0	0	0	298	370	0	2,407		
3/27/2017	1500	0	0	0	360	403	0	2,263		
3/28/2017	1324	0	0	0	339	409	0	2,072		
3/29/2017	1042	0	0	0	335	383	0	1,760		
3/30/2017	1408	0	0	0	388	445	0	2,241		
3/31/2017	1056	0	0	0	411	390	0	1,857		-
4/1/2017	982	0	0	0	426	427	0	1,835	14,435	2

		Landfil	l Gas Eextr	action Well			Dewatering			
				Daily and V	Veekly Sum	mary				
				Southeast	: County Lar	ndfill				
									WEEKLY	
	CT-1	CT-2	CT-3	EW-38	EW-44	EW-48	EW-66	All	TOTAL	Daily A
DATE	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gal)	(gpd)	(gal)	(gpd)
4/2/2017	982	0	0	0	426	427	0	1,835		
4/3/2017	909	0	0	0	366	411	0	1,686		
4/4/2017	786	0	0	0	185	352	0	1,323		
4/5/2017	827	1	0	0	376	440	0	1,644		
4/6/2017	643	1	8	0	245	306	0	1,203		
4/7/2017	537	1	0	0	204	283	0	1,025		
4/8/2017	90	0	0	0	59	64	0	213	8,929	1
4/9/2017	0	0	0	0	0	0	0	0		
4/10/2017	241	0	0	0	368	239	0	848		
4/11/2017	464	0	0	141	304	234	0	1,143		
4/12/2017	795	2	0	111	320	379	1121	2,728		
4/13/2017	952	0	0	90	292	374	510	2,218		
4/14/2017	747	1	0	55	345	316	363	1,827		
4/15/2017	638	0	0	55	397	336	334	1,760	10,524	1
4/16/2017	638	0	0	55	397	336	334	1,760	,	
4/17/2017	136	0	0	59	403	347	298	1,243		
4/18/2017	1118	0	0	46	451	364	335	2,314		
4/19/2017	407	0	0	40	336	252	233	1,268		
4/20/2017	551	0	0	49	437	333	293	1,663		
4/21/2017	537	0	0	66	396	287	281	1,567		
4/22/2017	661	0	0	76	460	347	283	1,827	11,642	1
4/23/2017	661	0	0	76	460	347	283	1,827	11)0 12	
4/24/2017	566	0	0	57	353	255	248	1,479		
4/25/2017	529	0	0	31	380	233	256	1,477		
4/26/2017	478	0	0	24	369	293	258	1,422		
4/27/2017	376	0	0	12	355	307	258	1,314		
4/28/2017	258	0	0	0	355	293	235	1,137		
4/29/2017	230	0	0	2	376	233	233	1,192	9,848	1
4/30/2017	287	0	0	2	376	284	243	1,192	5,040	
5/1/2017	311	0	0	2	378	204	243	1,205		
5/2/2017	316	0	2	4	380	271	240	1,205		
5/3/2017	310	0	0	4	340	275	240	1,221		
5/4/2017	429	0	0	38	340	273	241	1,203		
5/5/2017	334	0	0	15	340	204	230	1,327		
5/6/2017	87	0	0	0	340	213	220	919	8,195	1
5/7/2017	87	0	0	0	340	274	218	919	0,100	1
5/8/2017	95	0	0	0	340	185	213	833		
5/9/2017	233	0	0	0	340	266	215	1,054		
5/10/2017	187	0	0	0	340	289	213	1,034		
5/11/2017	259	0	0	0	340	329	207	1,023		
5/12/2017	331	0	0	8	340	318	234	1,102		
5/12/2017	335	4	0	8 10	344	303	62	1,214	7,290	1
5/13/2017	335	4	0	10	371	303	62	1,085	7,290	1
5/14/2017	239	4	0	10	335	276	02	850		
5/16/2017	239	0	0	0	300	276	233	972		
	204	0	0	0	300			972 883		
5/17/2017						308	0			
5/18/2017	243	0	0	0	351	340	0	934		
5/19/2017	204	0	0	0	304	291	0	799	C (0)	
5/20/2017	255	0	0	0	332	309	274	1,170	6,693	
5/21/2017	255	0	0	0	332	309	274	1,170		

	Appendix B Landfill Gas Eextraction Well and Condensate Trap Dewatering Daily and Weekly Summary Southeast County Landfill													
	CT-1 CT-2 CT-3 EW-38 EW-44 EW-48 EW-66 All TOTAL Daily Avg													
DATE	DATE (gal) (gal) (gal) (gal) (gal) (gal) (gal) (gpd) (gal) (gp													
5/23/2017	338	0	0	0	317	270	230	1,155						
5/24/2017	394	0	0	3	337	278	237	1,249						
5/25/2017	306	0	0	0	314	252	208	1,080						
5/26/2017	286	0	0	0	270	229	190	975						
5/27/2017	353	0	0	0	294	261	197	1,105	7,895	1128				
5/28/2017														
5/29/2017	5/29/2017 353 0 0 0 294 261 197 1,105													
5/30/2017	5/30/2017 355 0 0 0 288 264 191 1,098													
5/31/2017														

Appendix C Dewatering and Liquids Managements Summary

4041 Park Oaks Blvd. Suite 100 Tampa, FL 33610-9501 813 621-0080 FAX 813 623-6757 www.scsengineers.com

SCS ENGINEERS

March 10, 2017 File No. 09215600.03

MEMORANDUM

TO: Mr. Larry E. Ruiz, SC, Solid Waste Management Division

FROM: Mr. Bruce J. Clark, P.E., SCS Engineers

SUBJECT: Southeast County Landfill Dewatering & Liquids Management Summary

CC: File

BACKGROUND

As requested by the Hillsborough County Public Works Department, Solid Waste Management Division (SWMD), SCS Engineers (SCS) has completed a series of dewatering and liquids management efforts located in Phases I-VI of the Southeast County Landfill (Landfill). On December 16, 2016, SCS submitted a liquids assessment report to the Florida Department of Environmental Protection (FDEP) which included a liquids dewatering plan as part of an on-going investigation into elevated readings of select groundwater quality parameters at TH-67 and its possible connection to liquid levels in Phase II of the Landfill. A summary of work performed as well as our initial findings are presented in the following paragraphs for your consideration.

LANDFILL DEWATERING EFFORTS

SCS prepared a dewatering plan for parts of the landfill gas (LFG) extraction well (EW) system as a follow up to the previously-referenced report. On December 20, 2016, SCS submitted a summary of this LFG EW Dewatering Plan to the SWMD and FDEP. Two teams of professionals worked simultaneously on LFG EW clusters to remove liquids from strategic areas of the Landfill that would likely yield high flows and would lead to greater liquids removal from the Landfill. A map of LFG EWs that were dewatered can be found in **Attachment 1**.

Method Summary

Multiple pumps and teams were employed as a means of expediting the liquids removal process. Each team used a submersible pump to pump liquids from select EWs into a mobile tank operated by the SWMD. The tank was ultimately transported to the Main Leachate Pump Station (MLPS) and the contents discharged into the sump. Liquid in the sump was pumped to the Leachate Treatment and Reclamation Facility (LTRF). Prior to pumping, the depth to bottom and liquid level at the LFG EW was measured and recorded. If a LFG EW contained greater than two feet estimated liquid depth, the well was pumped; however, if a well was essentially dry or if liquid was at a level below the

0

Mr. Larry E. Ruiz March 10, 2017 Page 2

submersible pump intake (i.e. less than two feet), then the well was not dewatered (refer to **Attachment 2**).

An EW pumping cycle was generally completed during a full day of effort. However, in certain cases, the work day ended or the pump was unable to continue operating due to insufficient liquid level. In some instance the mobile tank was full and the field crew moved to another location while the tank was emptied. After one dewatering cycle was completed, personnel would return the following day to the same LFG EW, take a liquid level measurement, and then (if sufficient liquid was present) resume pumping until the well did not appear to recharge. Typically, each LFG EW was pumped four separate times unless there was insufficient recharge or some unforeseen issue. Any deviations from the planned four pump cycles are noted on the table in **Attachment 2**.

Dewatering Pumps

As part of the Dewatering Plan, between December 21, 2016 and January 5, 2017, the SWMD installed permanent pneumatic pumps in two LFG EWs and two condensate traps (CT). Pumps were installed in EW-44, EW-48, CT-1, and CT-2. These locations were selected based on recharge capacity determined during an initial dewatering study. The discharge lines are connected to the existing LFG condensate forcemain that flows to the leachate collection system. The SWMD has been monitoring the daily flow from these pumps.

CLEANING OF SELECTED WELLS

During SCS's initial field work in November and December 2016, we encountered a viscous black residue in certain LFG EWs at the Landfill. SWMD personnel also noted this material during their monitoring. Layne Christensen Company (Layne) was contracted to attempt to remove the residue. The following wells were cleaned prior to dewatering: EW-64, EW-66, EW-67, EW-69, and EW-71. These wells are shown in **Attachment 1.** Approximately 300 gallons of clean water was injected into each well in order to dilute the residue. An air lift pump was then used to pump liquid (with sediment) from each well. Liquid and residue were successfully removed from EW-66, EW-69, and EW-71. Layne was unable to pump liquid from EW-64 and EW-67. EW-64 was then treated with a mixture of approximately 295 gallons water and five gallons of chlorine to break up the residue. This was unsuccessful. It appears the solution flowed out of the well through the screen and into the surrounding tire chips.

Following the cleaning, EW-66, EW-69, and EW-71 were dewatered as described previously. EW-64 and EW-67 could not be dewatered. If requested by the SWMD, we will review alternate cleaning methods for these two wells.

DEWATERING SUMMARY

SCS's dewatering efforts were conducted beginning January 5, 2017 and ending January 27, 2017. A few summary metrics are included in **Table 1** on the following page. The full set of dewatering data is presented in **Attachment 2**.

Total Wells Pumped	25
Total Liquids Removed (Gal)	18,170
Well with Greatest Volume Removed	EW-50 (3,255 Gal Removed)
Wells with > 1,000 Gal Removed	EW-50, EW-30, EW-47, EW-66, EW-45, EW-49
Volume Pumped vs. Drawdown: Ratio >100	Pump Candidates: EW-47, EW-66, EW-30, EW-32

Table 1. SCLF LFG EW Dewatering Summary Data	(Jan. 5 – Jan. 27, 2017)
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The liquid levels were generally lower during the January 2017 event than measured in October 2016. Some of the EWs that were scheduled to be dewatered contained less than two feet of liquid and could not be pumped. In general, LFG EWs on the east side of the Landfill (Phase II and southeast side of Phase I) contained more than two feet of liquid and were dewatered. LFG EWs on the west side of the Landfill either did not contain enough liquid (less than two feet) to be pumped or, as in the case of EW-64, could not be pumped due to residue. A total of 25 of the initially planned 36 EWs were pumped. Of the remaining 11 EWs, nine were not pumped due to insufficient water (less than 2-feet) and two due to the previously mentioned residue.

Phase I Extraction Wells

The EWs in Phase I with the greatest volume pumped and best recharge are along the southeast near Phase II. Specifically EW-45, EW-47 and EW-50 exhibit the greatest volume and recharge. This seems reasonable since they are in or near the active filling area. The initial pumping of EW-49 produced a large quantity of leachate, but did not recharge as well as well as the three nearby EWs. EW-56 showed good recharge and relatively moderate volume.

Phase II Extraction Wells

The EWs in Phase II with the greatest volume pumped and best recharge are EW-30, EW-32 and EW-66. Other notable EWs include EW-38, EW-70, and EW-71. EW-38 did not produce as much volume, but was consistent and showed good recharge. Both EW-70 and EW-71 recharged well, but we have limited data.

Phases III, IV, V, and VI Extraction Wells

With the exception of EW-64, the EWs in Phases III, IV, V, and VI did not contain adequate liquid to be pumped. EW-64 appears to contain a black residue that is restricting pumping. This residue could not be removed with the cleaning attempts.

RECOMMENDATIONS

Phase | Extraction Wells

The EWs in Phase I with the greatest volume pumped and best recharge are along the southeast near Phase II. These include EW-45, EW-47, and EW-50. The SWMD has already installed four permanent

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pneumatic pumps along this section. There is adequate coverage and we do not recommend additional pumps in Phase I at this time.

Phase II Extraction Wells

The current pumps in Phase I and the pump installed in CT-1 provide leachate removal along the south side of Phase II. Additional dewatering should be conducted along the north and east sides. We recommend installing two additional pneumatic pumps in EWs within Phase II. Table 2 shows dewatering data associated with potential dewatering points within Phase II.

	Bottom	Pump	Average Volume	Liquid Depth	Liquid Depth	Change in Depth	Average Drawdown
Well	Elev.	Cycles	Pumped	Prior to	Prior to	First-to-	During
	(ft-NGVD)		per Cycle	First Cycle	Last Cycle	Last Cycle	Pumping
1			(Gal.)	(ft)	(ft)	(ft)	(Gal.)
North Sid	e						fai
EW-30	125.3	5	530**	6.7	4.2	2.5	3.7
EW-32	123.0	4	110	4.1	3.6	0.5	1.1
EW-66	123.9	2	950**	13.8	13.3	0.4	5.4
East Side							
EW-38	124.9	4*	187***	5.6	4.8	0.7	3.2
EW-39	123.7	4	115	6.5	5.3	1.2	4.3
EW-40	123.9	4*	170***	6.6	5.9	0.7	5.2

Table 2. Select Dewatering Summary Data

Notes:

* Some pump cycles not completed due to mechanical problems with pump equipment.

** Some pump cycles stopped before complete drawdown due to full tank. Volume included in average since volume > 100 gallons.

*** Average of completed cycles. Does not include cycles stopped due to equipment issues.

North Side

On the north side, we recommend installing a permanent pump in EW-66. We considered wells EW-30, EW-32 and EW-66, which are all good options. They each have their merits and have similar bottom depths, but EW-66 pumped the greatest volume with less drawdown. Unfortunately, EW-66 was pumped only two times, however the volume pumped from EW-66 increased with each pump cycle and exhibited good recharge. The average volume pumped from EW-30 was over 500 gallons, but showed limited recharge and may soon go dry with continuous pumping.

East Side

On the east side, we recommend installing a permanent pump in EW-38. This well produced a good volume with limited drawdown. EW-40 is an alternative, but exhibited more drawdown during pumping. Both EW-38 and EW-40 had similar reductions in liquid depth from the first pump cycle to the last.

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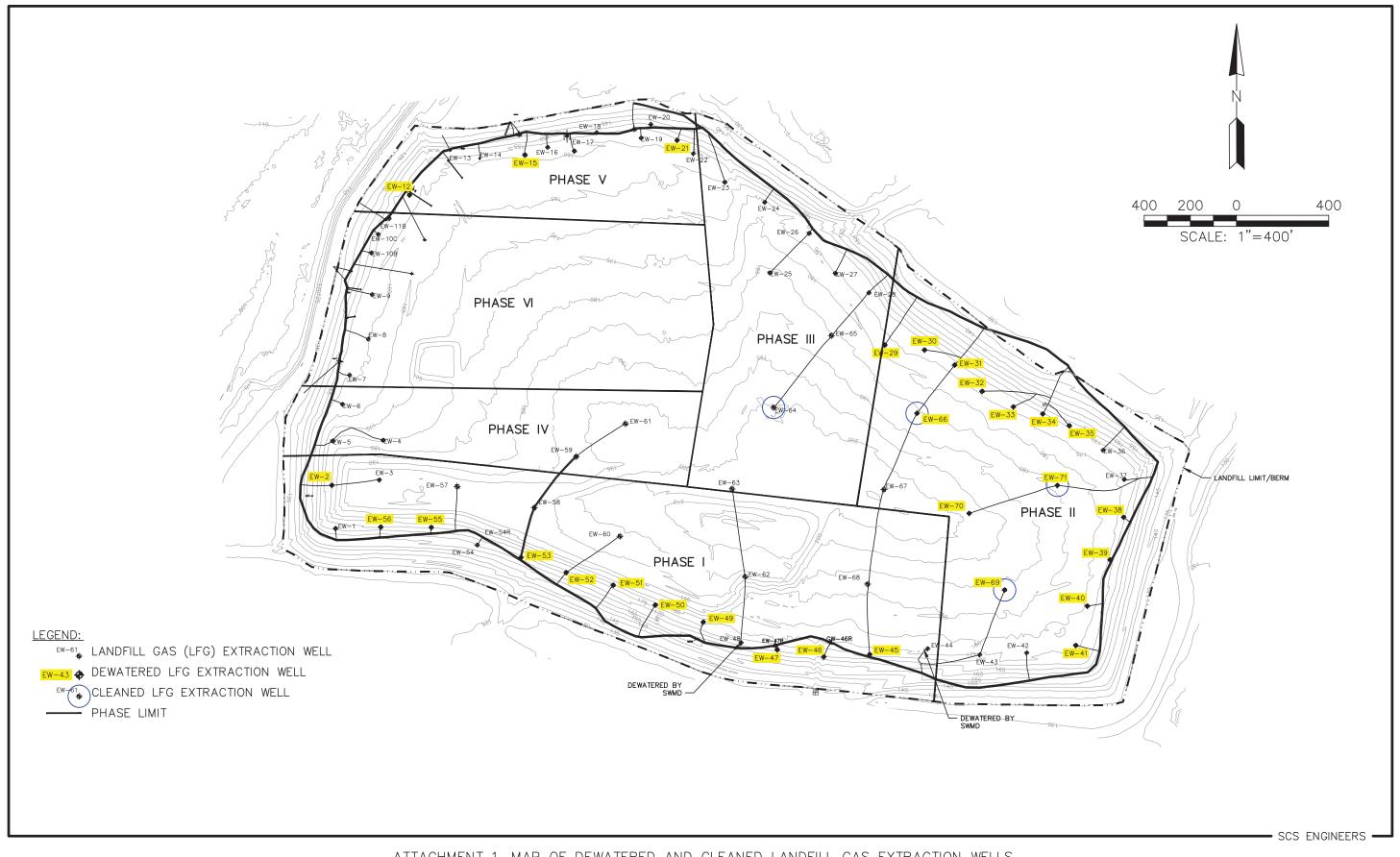
CONCLUSION

The dewatering provided information to select locations for the installation of permanent dewatering pumps. SCS provided our recommendations for pump installation based on a review of the data provided.

During the dewatering effort, water levels were monitored in other EWs in close proximity to the LFG EW being pumped. There was no indication that the liquid levels in the EWs are connected. Therefore, pumping a single EW may not remove liquid in a nearby EW.

During the dewatering effort, SCS and SWMD monitored liquid levels in the four older piezometers in Phase II (SB-01, SB-02, SB-03, and SB-05). The liquid levels did not lower or change as EWs were pumped. This may indicate there is no correlation between the liquid levels in these EWs and the piezometers. Extraction of liquid in areas where piezometers are installed may require a different and supplemental technique that removes liquid directly from the lower level of the landfill (i.e. at the sand drainage layer).

Attachment 1 LFG EW Dewatering Locations



Attachment 2 LFG EW Dewatering Data

Attachment 2. SCLF Dewatering Field Data (Jan 5 - Jan. 27, 2017)

								Allachmen	2. SCLF Dewatering Field	Dala (Jali 5 - J	Jan. 27, 2017)					
Phase	WELL	WELL DEPTH (ft-BTOC)	DATE	DEWATERING CYCLE	STARTING LIQUID LEVEL (ft-BTOC)	CALCULATED INITIAL LIQUID COLUMN (ft)	APPROX TIME PER CYCLE (min)	TOTAL QUANTITY PUMPED (est. gpd)	PHYSICAL CHARACTERISTICS	рН	CONDUCTIVITY (µS/cm)	FINAL LIQUID LEVEL (ff-BTOC)	CHANGE IN LIQUID COLUMN (ft.)	LIQUID PUMPED: COLUMN REDUCTION (Gal:ft.)	COMMENTS	
			1/20/17	1	57.5	3.0	12	50	Brown	7.41	17,450	58.5	1.0	50		
I	EW-2	60.5	1/23/17	2	57.5	3.1	8	20	Foamy, brown, visible gas	7.45	16,950	58.5	1.1	19	Foam at end of cycle - air in pump discharge	
			1/6/17	1	36.8	11.5	105	350	Light tan, odor	7.99	27,290	42.7	5.9	59	Near active fill area	
		40.0	1/9/17	2	37.3	11.0	150	400	Yellow, clear	7.48	33,990	43.4	6.1	66		
1	EW-45	48.3	1/10/17	3	38.0	10.3	160	400	Yellow, clear	7.44	43,060	44.2	6.2	65		
			1/11/17	4	38.2	10.1	240	500	Brown	7.93	43,250	44.0	5.8	86		
			1/6/17	1	32.7	10.5	100	120	Pale yellow, odor	7.38	10,340	41.4	8.7	14		
		(2.0	1/9/17	2	33.5	9.7	90	190	Pale yellow	7.52	7,510	40.4	6.9	27		
1	EW-46	43.2	1/10/17	3	33.9	9.3	85	175	Pale yellow	7.27	14,340	40.5	6.6	27		
			1/11/17	4	33.8	9.4	79	175	Pale yellow, odor	7.57	14,610	40.3	6.5	27		
			1/10/17	1	34.3	6.7	180	300	Black, odor	7.95	32,700	37.6	3.3	92	Stopped pump at the end of day	
			1/11/17	2	34.4	6.6	170	300	Black, odor	7.60	31,860	38.7	4.3	70	Stopped pump at the end of day	
I	EW-47	41.0	1/12/17	3	35.0	6.0	300	600	Black, odor	7.66	27,410	39.0	4.0	150	Stopped pump when tank filled up	
			1/16/17	4	35.2	5.8	437	900	Black, Visible gas	7.26	8,960	39.4	4.2	214	High flow, filled tank; stopped pump when tank filled up	
			1/13/17	1	47.8	6.5	45	300	Brown, odor	7.91	41,950	53.6	5.8	52		
				1/16/17	2	48.1	6.2	32	400	Black, visible gas odor	7.79	25,500	52.6	4.5	90	
	EW-49	54.3	1/17/17	3	48.5	5.8	100	150	Black, visible gas	7.45	36,910	52.5	4.0	38	Lower flow	
	211-47	54.0	1/18/17	4	49.5	4.8	14	180	Black, visible gas	7.52	46,420	52.4	2.9	62		
			1/19/17	5	49.5	4.8	9	25	Black, visible gas	7.61	38,170	52.5	3.0	8	Difficulty getting flow due to short water column	
			1/13/17	1	43.0	3.0	120	600	Brown, odor	7.94	36,290	52.2	9.2	65	Stopped pump when tank filled up	
			1/16/17	2	43.4	2.6	325	780	Brown, odor	7.43	24,510	52.1	8.7	90		
I.	EW-50	46.0	1/17/17	3	43.5	2.5	394	625	Brown, odor	7.41	13,480	51.7	8.2	77		
			1/18/17	4	43.4	2.6	331	650	Brown, odor	7.53	38,750	51.8	8.4	77		
			1/19/17	5	45.0	1.0	300	600	Brown, odor	7.58	34,030	51.3	6.3	96	Stopped pump at the end of day	
			1/18/17	1	53.9	4.6	0	0	Light brown	7.64	25,240	53.9	0.0	N/A	Pump kept turning off - no pumping	
I	EW-51	58.5	1/19/17	2	54.0	4.5	20	100	Foamy, brown, odor	7.15	35,600	57.0	3.0	33	Foam at end of cycle - air in pump discharge	
			1/20/17	3	54.2	4.3	39	155	Dark brown, odor	7.33	25,770	56.2	2.0	78		
I	EW-52	52.9	1/19/17	1	51.0	1.9	NR	NR	NR	NR	NR	51.0	0.0	N/A	Insufficient water, did not pump	
	EW-53	50.9	1/20/17	1	48.5	2.4	6	50	Dark brown	7.42	32,130	49.7	1.2	42		
1	E VV - 33	50.9	1/27/17	2	49.1	1.8	0	0	NR	NR	NR	49.1	0.0	N/A	Insufficient water, did not pump	
	EW-55	57.3	1/19/17	1	57.0	0.3	NR	NR	NR	NR	NR	57.0	0.0	N/A	Did not pump - error in WL reading	
	EVV-33	57.3	1/20/17	2	48.5	8.8	8	50	Dark brown, odor	7.42	32,130	49.7	1.2	42		
1	EW-56	57.0	1/23/17	1	52.9	4.1	95	200	Light brown, visible gas	7.51	15,800	54.9	2.0	103		
	L VV-30	57.0	1/27/17	2	53.0	4.0	60	185	Light brown, visible gas	8.00	31,000	55.5	2.5	74		
I	EW-68	52.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Located in active fill area - did not pump	

NR = Data was not recorded due to pump malfunction, end of work day, or other circumstances.

ND = Not dewatered; see comments for reason.

BTOC = Below Top of Casing

GPM = Gallons per Minute

Attachment 2. SCLF Dewatering Field Data (Jan 5 - Jan. 27, 2017)

							<u>т т</u>	Anachinem	2. SCLF Dewatering Field	Dala (Juli 5	Jun. 27, 2017)				
Phase	WELL	WELL DEPTH (ft-BTOC)	DATE	DEWATERING CYCLE	STARTING LIQUID LEVEL (ff-BTOC)	CALCULATED INITIAL LIQUID COLUMN (ft)	APPROX TIME PER CYCLE (min)	TOTAL QUANTITY PUMPED (est. gpd)	PHYSICAL CHARACTERISTICS	рН	CONDUCTIVITY (µ\$/cm)	FINAL LIQUID LEVEL (ft-BTOC)	CHANGE IN LIQUID COLUMN (ft.)	LIQUID PUMPED: COLUMN REDUCTION (Gal:ft.)	COMMENTS
			1/11/17	1	54.9	2.3	5	15	Light brown	NR	NR	56.0	1.1	14	Short pump cycle
П	EW-29	57.2	1/12/17	2	55.9	1.3	0	0	NR	NR	NR	55.9	0.0	N/A	Insufficient water, did not pump
			1/17/17	3	55.8	1.4	0	0	NR	NR	NR	55.8	0.0	N/A	Insufficient water, did not pump
			1/11/17	1	43.5	6.7	60	350	Brown, odor	7.73	31,600	48.8	5.3	66	
			1/12/17	2	44.8	5.4	60	350	Brown, odor	7.84	28,360	47.4	2.6	135	
П	EW-30	50.2	1/17/17	3	43.7	6.5	234	820	Brown , odor	7.62	25,180	48.6	4.8	169	Stopped pump when tank filled up
	211 00	0012	1/18/17	4	45.5	4.7	357	700	Brown, odor	7.45	23,500	48.5	3.0	233	Stopped pump at the end of day
			1/19/17	5	46.0	4.2	75	430	Foamy, brown, odor	7.28	29,860	48.8	2.8	154	Stopped pump at the end of day. Foam may indicate air in discharge line.
			1/12/17	1	43.6	1.4	53	580	Brown, odor	8.10	17,250	46.4	2.8	211	
п	EW-31	45.0	1/13/17	2	44.3	0.7	0	0	NR	NR	NR	44.3	0.0	N/A	Insufficient water, did not pump
11	EVV-31	45.0	1/17/17	3	43.6	1.4	0	0	NR	NR	NR	43.6	0.0	N/A	Insufficient water, did not pump
			1/19/17	4	43.7	1.3	0	0	NR	NR	NR	43.7	0.0	N/A	Insufficient water, did not pump
			1/12/17	1	49.2	4.1	6	30	Brown, odor	7.82	30,990	50.4	1.2	26	
	EW-32	53.3	1/13/17	2	49.6	3.7	4	10	Brown, odor	7.88	32,330	50.7	1.1	9	
	EVV-32	55.5	1/17/17	3	49.3	4.1	47	100	Visible gas, light brown	7.56	27,700	50.5	1.3	80	Better flow than previous pumpage
			1/18/17	4	49.7	3.6	74	300	Visible gas, light brown	7.63	30,740	50.6	0.9	319	Better flow than previous pumpage
			1/12/17	1	48.3	1.7	4	10	Brown, odor	7.97	32,890	48.7	0.4	29	Difficulty priming pump
	EW-33	50.0	1/13/17	2	48.5	1.5	0	0	NR	NR	NR	48.5	0.0	N/A	Insufficient water, did not pump
11	EVV-33	50.0	1/17/17	3	48.0	2.0	0	0	NR	NR	NR	48.0	0.0	N/A	Insufficient water, did not pump
		ſ	1/19/17	4	48.0	2.0	0	0	NR	NR	NR	48.0	0.0	N/A	Insufficient water, did not pump
			1/12/17	1	39.7	2.6	39	200	Brown, odor	7.74	27,830	45.0	5.3	38	
Ш	EW-34	42.3	1/13/17	2	40.5	1.8	0	0	NR	NR	NR	40.5	0.0	N/A	Insufficient water, did not pump
11	EVV-34	42.3	1/17/17	3	39.8	2.6	0	0	NR	NR	NR	39.8	0.0	N/A	Insufficient water, did not pump
			1/19/17	4	39.9	2.5	19	60	Brown, odor	7.47	38,670	45.3	5.4	11	Short pump cycle
			1/12/17	1	41.4	1.9	5	15	NR	NR	NR	41.9	0.5	30	Short pump time - unable to retrieve sample
п	EW-35	43.3	1/13/17	2	42.6	0.7	0	0	NR	NR	NR	42.6	0.0	N/A	Insufficient water, did not pump
11	LVV-33	45.5	1/17/17	3	41.4	1.9	0	0	NR	NR	NR	41.4	0.0	N/A	Insufficient water, did not pump
			1/19/17	4	41.4	1.9	0	0	NR	NR	NR	41.4	0.0	N/A	Insufficient water, did not pump
			1/5/17	1	43.3	5.6	15	100	Dark brown, warm, odor	7.80	30,000	46.8	3.5	29	Stopped pump early to avoid overheating
П	EW-38	48.9	1/6/17	2	43.5	5.4	24	200	Dark brown, odor	7.84	30,020	46.9	3.4	59	
			1/9/17	3	44.3	4.6	30	200	Brown, odor	7.50	15,550	47.0	2.7	74	
			1/10/17	4	44.1	4.8	25	160	Brown, odor	7.91	42,970	47.2	3.1	52	
			1/5/17	1	44.6	6.5	20	100	Tan	7.68	11,450	49.0	4.5	22	
Ш	EW-39	51.0	1/6/17	2	44.5	6.5	15	100	Warm, brown, odor	7.95	22,890	49.1	4.6	22	
			1/9/17	3	44.4	6.6	30	180	Tan, odor	7.43	30,580	49.0	4.6	39	
			1/11/17	4	45.7	5.3	27	80	Tan, odor	8.06	38,340	49.0	3.3	24	

NR = Data was not recorded due to pump malfunction, end of work day, or other circumstances.

ND = Not dewatered; see comments for reason.

BTOC = Below Top of Casing

GPM = Gallons per Minute

Attachment 2. SCLF Dewatering Field Data (Jan 5 - Jan. 27, 2017)

Phase	WELL	WELL DEPTH (ft-BTOC)	DATE	DEWATERING CYCLE	STARTING LIQUID LEVEL (ft-BTOC)	CALCULATED INITIAL LIQUID COLUMN (ft)	APPROX TIME PER CYCLE (min)	TOTAL QUANTITY PUMPED (est. gpd)	PHYSICAL CHARACTERISTICS	рН	CONDUCTIVITY (µS/cm)	FINAL LIQUID LEVEL (ft-BTOC)	CHANGE IN LIQUID COLUMN (ft.)	LIQUID PUMPED: COLUMN REDUCTION (Gal:ft.)	COMMENTS
			1/6/17	1	50.4	6.6	28	180	Tan, Warm, odor	7.78	22,930	55.1	4.7	38	
	EW-40	57.0	1/9/17	2	49.9	7.1	30	200	Light tan	7.23	28,400	55.0	5.1	39	
	EVV-40	57.0	1/10/17	3	51.2	5.8	0	0	NR	NR	NR	51.2	0.0	N/A	Very little pumped due to pump malfunction
			1/11/17	4	51.1	5.9	35	130	Tan, odor	7.77	36,940	57.0	5.9	22	
II	EW-41	52.7	1/6/17	1	50.7	2.0	0	0	NR	NR	NR	50.7	0.0	N/A	Insufficient water, did not pump
Ш	EW-66	66.4	1/23/17	1	52.7	13.8	83	500	Foamy, brown	7.70	27,460	55.3	2.6	191	Stopped pump when tank filled up
п	EVV-00	00.4	1/24/17	2	53.1	13.3	273	1400	Brown, visible gas	7.67	28,520	61.3	8.2	172	Stopped pump when tank filled up
Ш	EW-67	83.0	1/20/17	ND	73.2	9.8	0	0	ND	ND	ND	ND	ND	N/A	Blockage from black residue - did not pump
Ш	EW-69	67.5	1/20/17	1	60.2	7.3	153	350	Light brown, odor	7.91	19,020	65.7	5.4	65	
	L **-07	07.5	1/27/17	2	62.0	5.5	58	125	Brownish, odor	7.67	29,950	65.1	3.1	40	
Ш	EW-70	78.2	1/13/17	1	63.8	14.4	95	340	Brown, odor	8.16	30,860	76.0	12.2	28	
"	L **-/ 0	/ 0.2	1/26/17	2	62.5	15.7	0	0	NR	NR	NR	62.5	0.0	N/A	Pump operational difficulty
	EW-71	62.1	1/20/17	1	49.1	13.1	106	325	Light brown, odor	8.09	35,650	61.4	12.4	26	
п		02.1	1/23/17	2	49.6	12.6	34	270	Brown, visible gas	7.70	26,950	61.2	11.7	23	
Ш	EW-27	50.3	1/23/17	ND	49.2	1.1	ND	ND	ND	ND	ND	49.2	0.0	N/A	Insufficient water, did not pump
	EW-63	77.0	1/20/17	ND	76.6	0.4	ND	ND	ND	ND	ND	76.6	0.0	N/A	Insufficient water, did not pump.
	EW-64	79.0	1/25/17	ND	66.3	12.7	ND	ND	ND	ND	ND	66.3	0.0	N/A	Blockage from black residue - did not pump
III	EW-65	70.6	1/25/17	ND	70.6	0.0	ND	ND	ND	ND	ND	70.6	0.0	N/A	Insufficient water, did not pump
IV	EW-61	77.0	1/25/17	ND	76.4	0.6	ND	ND	ND	ND	ND	76.4	0.0	N/A	Insufficient water, did not pump
V	EW-12	40.5	1/23/17	1	40.0	0.5	NR	NR	NR	NR	NR	40.0	0.0	N/A	Insufficient water, did not pump
V	EW-15	43.0	1/23/17	1	41.0	2.0	NR	NR	NR	NR	NR	41.0	0.0	N/A	Insufficient water, did not pump
V	EW-21	36.3	1/23/17	1	32.7	3.6	28	40	Dark brown	6.94	41,720	34.5	1.8	22	
	2 21	00.0	1/24/17	2	34.3	2.0	0	0	NR	NR	NR	34.3	0.0	N/A	Insufficient water, did not pump

Appendix D Trench Exploration Work Memorandum February 15, 2017



PUBLIC WORKS

PO Box 1110 Tampa, FL 33601-1110 (813) 272-5912 | Fax: (813) 272-5811

MEMORANDUM

DATE: February 15, 2017

- TO: Kimberly Byer, Division Director, Public Works Department, Solid Waste Management Division
- FROM: Larry Ruiz, Section Manager, Public Works Department, Solid Waste Management Division

SUBJECT: Trench Exploration Work at the Southeast County Landfill

The Solid Waste Management Division Staff and Waste Management conducted a trench exploration project with the intent to locate the perimeter leachate collection and recovery system (LCRS) header pipe for Phases I through III. The main goal of the exploration was to locate the LCRS headers while at the same time preventing damage to the LCRS header, perimeter hypalon liner, and the bottom clay liner. To accomplish this goal, the following methodology was used:

- An excavation of a 4-foot wide trench was made 25 feet inside the solid waste boundary, away from the edge of the perimeter hypalon liner.
- The approximate location of the header was field located by a Surveyor using coordinates provided by SCS Engineers obtained using information available from old as-built drawings (See Figure 1).
- Initially the trenches were planned to extend 50 feet in length on each side of the survey marker for a total length of 100 feet.
- Excavation occurred to the top of the sand layer and the top 12 inches of sand was removed. Existing cover soil was stockpiled for reuse. Waste removed was hauled to the active working face.
- Using the excavator bucket teeth the operator scraped the upper 12 inches of the remaining sand layer with the expectation of locating the upper portion of the LCRS gravel trench (assuming the total sand layer is 3 feet thick and the gravel trench around the pipe is 2 square feet).
- After the trench exploration was completed, the trench was backfilled with sand to about 2 feet from the surface. Stockpiled clayey cover soil was used for the remaining 2 feet.

BOARD OF COUNTY COMMISSIONERS Victor D. Crist Ken Hagan Al Higginbotham Pat Kemp Lesley "Les" Miller, Jr. Sandra L. Murman Stacy R. White COUNTY ADMINISTRATOR Michael S. Merrill COUNTY ATTORNEY Chip Fletcher INTERNAL AUDITOR Peggy Caskey

CHIEF DEVELOPMENT & INFRASTRUCTURE SERVICES ADMINISTRATOR Lucia E. Garsys Kimberly Byer February 15, 2017 Page 2

Phase I Observations:

The trench in Phase I was completed on February 1, 2017. The trench was located in the middle of the southern footprint of Phase I. The trench was 108 feet long by 15 feet deep. The drainage sand layer appeared moist and the waste was dry. At the trench location the waste consisted of a 2-foot thick layer of class I MSW with a large quantity of agricultural plastic material. No ash was observed (See Picture No. 1). The LCRS gravel trench was located and 20 feet of the trench remains open to allow for the future installation of a cleanout pipe. The SWMD is currently obtaining quotes from Contractors for the installation of a cleanout pipe.

Phase II Observations:

The trench in Phase II began on February 7, 2017. Two trenches were excavated in Phase II. The first trench (2A) was located in the middle of the eastern footprint of Phase II. This trench was 142 feet long by 15 feet deep. The drainage sand appeared moist and the waste was dry. At the trench location the waste type consisted of a 2-foot layer of class I MSW with a large quantity of agricultural plastic material. No ash was observed (See Picture No. 2). The LCRS gravel trench was not located and this trench was backfilled.

The second trench (2B) was located in the southeast portion of the eastern footprint of Phase II. This trench was 100 feet long by 15 feet deep. The drainage sand was saturated and the waste was wet. At the trench location the waste consisted of a 3-foot layer of class I MSW with a large quantity of agricultural plastic material. No ash was observed (See Picture No. 3). A possible location of the LCRS gravel trench was located, however, it could not be confirmed due to standing leachate in the trench. On February 10, 2017, the SWMD installed a temporary vacuum assisted diesel pump to remove leachate from this location (See Picture No. 4). This 20 foot long portion of the excavated trench remains open to allow for future dewatering and confirmation of the trench location. If the LCRS trench location is confirmed, it will be followed by installation of a cleanout pipe. The SWMD is currently obtaining quotes from Contractors for the installation of a cleanout pipe.

Phase III Observations:

The trench in Phase III was completed from February 2nd through the 6th, 2017. The trench was located in the northwest corner of the northern footprint of Phase III. The trench was 190 feet long by 20 feet deep. The drainage sand appeared moist and the waste was dry. At the trench location the waste consisted of a 6-foot layer of class I MSW with a large quantity of agricultural plastic material. Ash was observed mixed with the plastic material (See Picture No. 5). The LCRS gravel trench was not located and the trench was backfilled. Unless additional as-built information is found to better locate this gravel LCRS trench, the SWMD is not planning additional trenching in Phase III.

Please let me know if you have any questions regarding the information provided.

Sincerely,

Jarry E. Ruiz, SC

Larry É. Ruiz, SC Manager Landfill Operation Solid Waste Management Division

LR/ya Enclosures





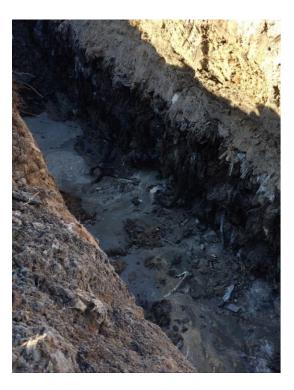
Phase I trench looking west showing top of sand layer. Green pipe in the picture is an abandoned leachate forcemain.



Picture 2

Phase II trench "A" looking south showing top of sand layer.





Phase II trench "B" looking south showing top of sand layer.





Phase II trench "B" looking north showing temporary pump.





Phase III trench looking east showing top of sand layer.

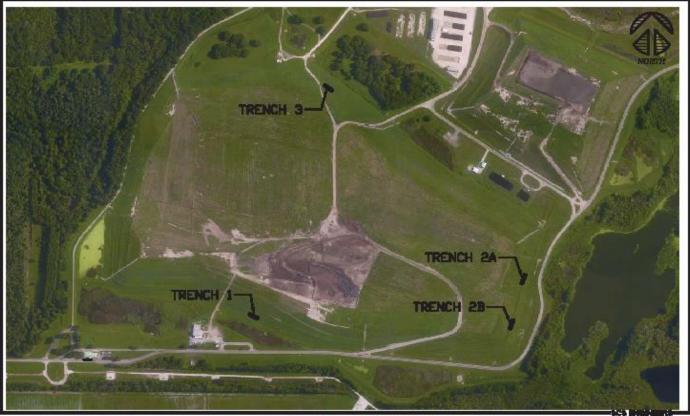


FIGURE 1 - TRENCH LOCATION FLAN

Appendix E Florida JetClean Reports March 2017

HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

Hillsborough County Solid Waste Southeast Landfill Phase 1 Header 2017 Pipe Jetcleaning

Work Performed March 2017

> Conducted By: Florida Jetclean 800-226-8013

HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

REPORT

DATE: 3/23/2017TO: Larry Ruiz – Hillsborough County Solid Waste Management - SELFFROM: Ralph Calistri (floridajetclean@yahoo.com)SUBJECT: Southeast Landfill - Phase 1 Header - Jetcleaning Project

Florida Jetclean completed the high-pressure water-jetting of the Phase 1 Header - Access 1, 2 & 3, leachate collection piping on 3/9/2017.

As the below jetting log indicates, the Phase 1 Header piping was jetcleaned as far as possible from the available access locations utilizing high-pressure water-jetting nozzle.

SOUTHEAST LANDFILL – PHASE 1 HEADER LEACHATE COLLECTION SYSTEM JETTING LOG JETTING PERFORMED BY FLORIDA JETCLEAN MARCH 2017

LOCATION	ACHIEVED DISTANCE (ft)	COMMENTS
P1 Header - Access 1	913'	End of pipe reached.
P1 Header - Access 1	91'	End of pipe reached.
P1 Header - Access 1	97'	End of pipe reached.

Please call us with questions or concerns.

Regards, Ralph Colothi

Ralph Calistri - Florida Jetclean - 800-226-8013

HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

Hillsborough County Solid Waste Southeast Landfill Phase 1 Header 2017 Pipe EX Video Inspections

Work Performed March 2017

> Conducted By: Florida Jetclean 800-226-8013

HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

REPORT

DATE: 3/23/2017TO: Larry Ruiz – Hillsborough County Solid Waste Management - SELFFROM: Ralph Calistri (floridajetclean@yahoo.com)SUBJECT: Southeast Landfill - Phase 1 Header - EX Video Inspection Project

Florida Jetclean completed the explosion-proof video-inspection work on the Phase 1 leachate collection Header, Access locations 1, 2 & 3, on 3/9/2017.

Explosion-proof Video-inspections:

After pipe jetcleaning was completed, the above piping was video-inspected as far as possible from each available access location utilizing certified explosion-proof video-inspection equipment. Please reference the provided videos, Pipe Graphic Reports, and CCTV Survey Listings for the detailed results of these inspections.

Please call us with questions or concerns.

Regards,

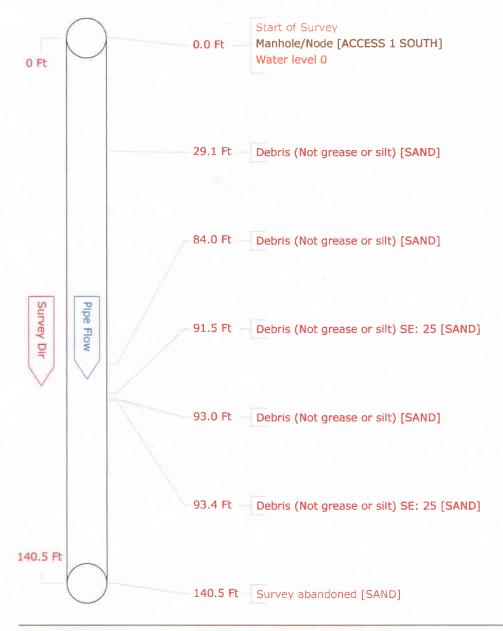
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Ralph Calistri - Florida Jetclean - 800-226-8013

CCTV	Surveys	CCTV Surveys List for HILLSBOROUGH COUNTY	OUNTY							
Numt	er of surv	Number of surveys in this list is 4	as of Thursday, I	Thursday, March 09, 2017				Unit of	Unit of measure:	Ĥ
Setup	Setup Date	Street	Start MH	Finish MH	Dir	Dir Size inch	Pre Clean	Vid Cassette Scheduled Surveyed Length Length	Scheduled S Length 1	Surveyed Length
-	3/9/2017	PHASE 1 HEADER	ACCESS 1 SOUTH-	NORTH	۵	8	≻	٢		140.5
2	3/9/2017	PHASE 1 HEADER	ACCESS 2	EAST	n	8	٢	1	91.0	91.7
3	3/9/2017	PHASE 1 HEADER	ACCESS 3	WEST	n	8	٢	1	97.5	97.6
4	3/9/2017	PHASE 1 HEADER	ACCESS 1 SOUTH-	NORTH	۵	8	۲	£		149.9
						F	otal Sch Total Lei	Total Scheduled Length Total Length Surveyed	188.5	479.7



Pipe Graphic Report of PLR	ACCESS 1 SOL	ITH- A	for	HILLS	BOROUGH	COUNTY
Work Order	Contract	Vid	leo	1	Setup	1
Facility Op	erator	Van Ref			Surveyed On	03/09/2017
Street Name PHASE 1 HEADER	City	SE H	ILLSBOR	OUGH LF	=	
Location type Berm						
Surface						
Survey purpose Other (state in comm	ents)	Weathe	r	Dry		
Pipe Use Other (state in comm	nents) Schedule length	n Ft	From /	ACCESS	1 SOUTH-	Depth
Shape Circular	Size 8 I	by ins	To I	NORTH		Depth
Material Polyvinyl chloride	Joint spacing	Ft	Directio	n Dow	Instream	
Lining	Year laid		Pre-clea	n Y	Last cleaned	3/8/2017
General note JETTING 913 FEET			Structu	ral	Service	Constructional
Location note			Miscella	aneous	Hydraulic	





SH COUNTY
HILLSBOROUGH COUNT
for
of ACCESS 1 SOUTH- A
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CCTV pictur

17.92

Direction Downstream Setup 1	WeatherDry	To Manhole NORTH
Surveyed On 03/09/2017 Direction	City Name SE HILLSBOROUGH	LF From Manhole ACCESS 1 SOUTH-
Video 1		
Work Order	Street Name PHASE 1 HEADER	Location Berm

Date: 03/09/2017 Distance: 29.1 Ft Obs: Debris (Not grease or silt)

vation: DE(Debris (Not grease o ir: 29.12

> Comments: SAND

Date: 03/09/2017 Distance: 91.5 Ft Obs: Debris (Not grease or silt)

Comments: SAND Date: 03/09/2017 Distance: 93.4 Ft Obs: Debris (Not grease or silt)

Comments: SAND







Date: 03/09/2017 Distance: 84.0 Ft Obs: Debris (Not grease or silt)

Comments: SAND Date: 03/09/2017 Distance: 93.0 Ft Obs: Debris (Not grease or silt)

Comments: SAND Date: 03/09/2017 Distance: 140.5 Ft Obs: Survey abandoned

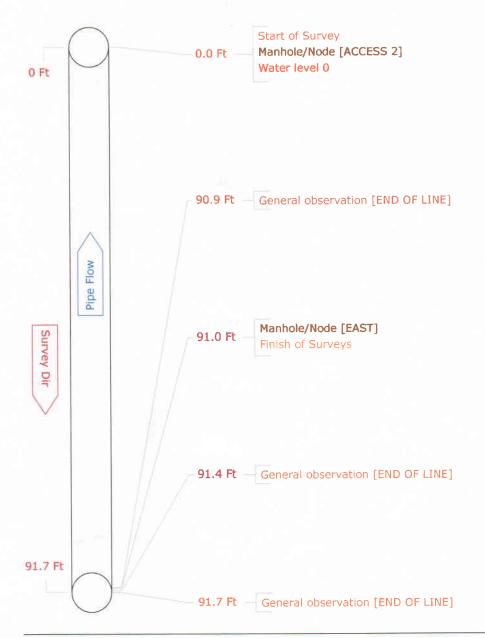
Obs: Survey aban Comments: SAND

Observation: DF.(bebris (Nat grasse o counter: 84.0) From: Rimarks: SAND





Pipe Graphic Report of PLR	EAST	В			for	HILLS	BOROUGH C	OUNTY
Work Order Facility Ope	Contract erator		Var	Vid Ref	leo	1	Setup Surveyed On	2 03/09/2017
Street Name PHASE 1 HEADER Location type Berm Surface		City		SE H	IILLSBOR	OUGH L	F	
Survey purpose Other (state in comm	ents)		v	Veathe	r	Dry		
Pipe Use Other (state in comm Shape Circular	ents) Schedul Size	le length 8 by	91.0	Ft ins		ACCESS EAST	2	Depth Depth
Material Polyvinyl chloride Lining	Joint sp Year lai	-		Ft	Directio Pre-clea		stream Last cleaned	3/8/2017
General note JETTING 91 FEET Location note			đ		Structu Misceli	iral Ianeous	<mark>Service</mark> Hydraulic	Constructional





CCTV pictures of EAST

8

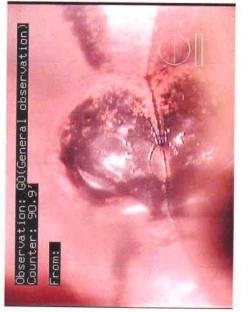
for HILLSBOROUGH COUNTY

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Direction Unstream	Weather Dry	To Manhole EAST
Surveved On 03/09/2017	City Name SE HILLSBOROUGH LF	From Manhole ACCESS 2
Video 1	SE 1 HEADER	
Work Order	Street Name PHASE 1 HEADER	Location Berm

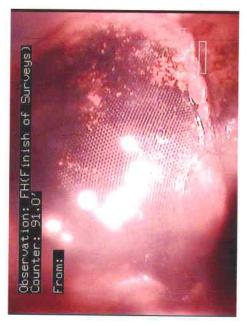
Date: 03/09/2017 Distance: 90.9 Ft Obs: General observation

Comments: END OF LINE



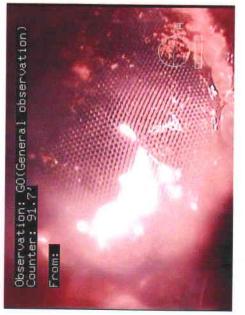
Date: 03/09/2017 Distance: 91.0 Ft Obs: Finish of Surveys

Comments:

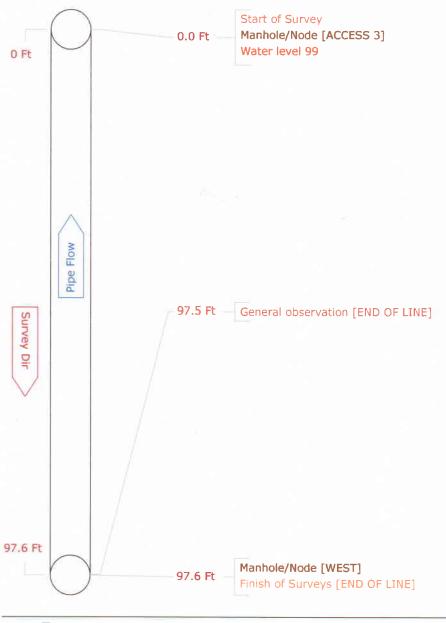


Date: 03/09/2017 Distance: 91.7 Ft Obs: General observation

Comments: END OF LINE



Pipe Graphic Report of PLR	WEST	С			for	HIL	LSI	BOROUGH C	OUNTY	
Work Order C	ontract			Vic	leo	1		Setup	3	
Facility Operate	or		Var	n Ref				Surveyed On	03/09/2017	7
Street Name PHASE 1 HEADER		City		SE F	IILLSBO	ROUG	H LF			
Location type Berm										
Surface										
Survey purpose Other (state in comments			۷	Veathe	r	Dry				
Pipe Use Other (state in comments) Schedul	e length	97.5	Ft	From	ACCE	SS :	3	Depth	ाम - म
Shape Circular	Size	8 by		ins	То	WEST	Г		Depth	F t
Material Polyvinyl chloride	Joint spa	acing		Ft	Directi	on	Upst	ream		-
Lining	Year laid	1			Pre-cle	ean	Y	Last cleaned	3/8/2017	
General note JETTING=97 FEET					Struc	tural		Service	Construction	al
Location note					Misce	llaneou	JS	Hydraulic		

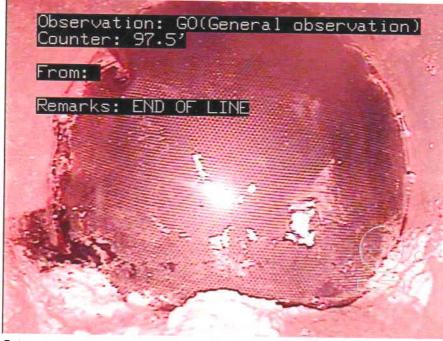


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CCTV pictures of WEST C

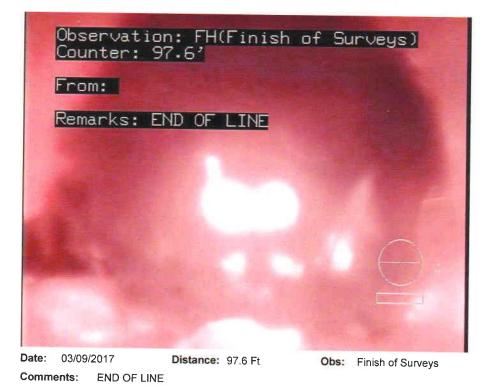
for HILLSBOROUGH COUNTY

Work Order		Surveyed On 03/09/2017	Setup 3
Street Name PHASE 1 HEAD	PER		Video 1
City Name SE HILLSBOR	DUGH LF	Weather Dry	VIGEO
Location Berm			
From Manhole ACCESS 3	To Manhole	WEST	Direction Upstream



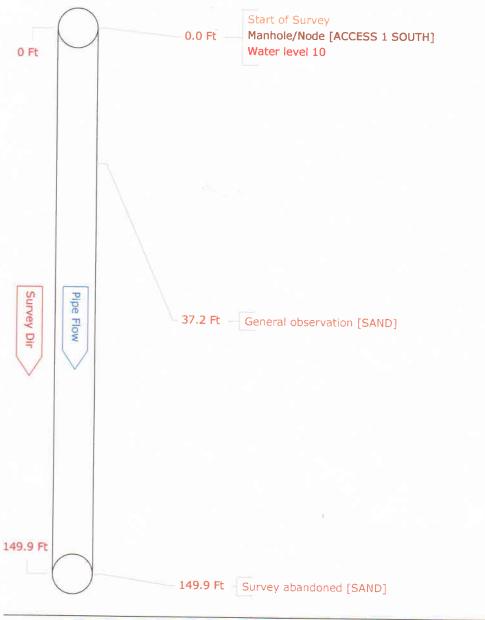
 Date:
 03/09/2017
 Distance:
 97.5 Ft
 Obs:
 General observation

 Comments:
 END OF LINE
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PipeLogiX

Pipe Graphic Report of PLR	CCESS 1 SOUTH- D		for	HILLS	BOROUGH	OUNTY
Work OrderCorFacilityOperator	tract	Vid Van Ref	eo '	1	Setup Surveyed On	4 03/09/2017
Street Name PHASE 1 HEADER Location type Berm	City	SE H	ILLSBOR	ough Li		
Survey purpose Other (state in comments)		Weather	· [Dry		
Pipe Use Other (state in comments)	Schedule length	Ft	From A	CCESS	1 SOUTH-	Depth
Shape Circular	Size 8 by	ins	To N	IORTH		Depth
Material Polyvinyl chloride	Joint spacing	Ft	Directior	1 Dow	nstream	p t
Lining	Year laid		Pre-clear	n Y	Last cleaned	3/8/2017
General note JETTING=913 FEET			Structur	al	Service	Constructional
Location note			Miscella	neous	Hydraulic	





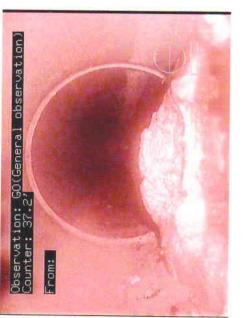
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for HILLSBOROUGH COUNTY

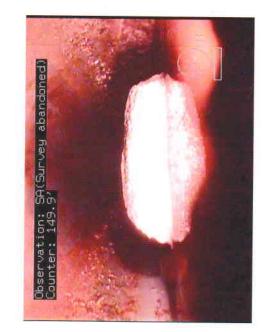
Work Order	Video 1	Surveyed On 03/09/2017	Direction Downstream	Setup 4
Street Name PHASE 1 HEADER		City Name SE HILLSBOROUGH LF	Weather Dry	
Location Berm		From Manhole ACCESS 1 SOUTH-	DUTH- To Manhole NORTH	IORTH

Date: 03/09/2017 Distance: 37.2 Ft Obs: General observation

Comments: SAND



Date: 03/09/2017 Distance: 149.9 Ft Obs: Survey abandoned Comments: SAND



HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

Hillsborough County Solid Waste Southeast Landfill 2017 Pipe Jetcleaning

Work Performed April 2017

> Conducted By: Florida Jetclean 800-226-8013

HIGH PRESSURE WATER JETTING EXPLOSION PROOF VIDEO INSPECTION VACUUM TRUCK SERVICES WWW.FLORIDAJETCLEAN.COM 7538 DUNBRIDGE DRIVE ODESSA, FL 33556 T: 800-226-8013 / F: 813-926-4616 FLORIDAJETCLEAN@YAHOO.COM

REPORT

DATE	: 4/4/2017
ТО	: Larry Ruiz – Hillsborough County Solid Waste Management - SELF
FROM	: Ralph Calistri (floridajetclean@yahoo.com)
SUBJECT	: Southeast Landfill - Leachate Pipe Jetcleaning Project

Florida Jetclean completed the high-pressure water-jetting of selected areas of the leachate collection piping at the Hillsborough County Southeast Landfill on 4/3/2017. The below jetting log documents the pipes that were addressed, and the distances that were achieved with the high-pressure water-jetting nozzle in each pipe. These pipes were blockage free at the completion of these activities.

SOUTHEAST LANDFILL LEACHATE COLLECTION SYSTEM JETTING LOG JETTING PERFORMED BY FLORIDA JETCLEAN APRIL 2017

LOCATION	ACHIEVED DISTANCE (ft)	COMMENTS
Phase IV - CO 4-1	1,965'	Maximum Distance Achievable
Phase V - CO 5-2	1,125'	End Of Pipe Reached.
Phase V - CO 5-3	1,200'	End Of Pipe Reached.
Phase V - CO 5-1	1,450'	End Of Pipe Reached.
Phase VI - CO 6-1	1,180'	End Of Pipe Reached.
Phase V - CO 5-4	1,020'	End Of Pipe Reached.

Please call us with questions or concerns.

Regards,

Ralph Calistri - Florida Jetclean - 800-226-8013

Appendix F Boring and Piezometer Installation Logs

									Southeast	County La	ndfill								
			Survey			Во	ing						Piezometer	Construction					
Phase	Boring No.	Northing	Easting	Elevation Ground (NGVD 1929)	Depth Top of Clay (ft bgs)	Elevation Top of Clay (NGVD 1929)	Depth Top of Sand (ft bgs)	Elevation Top of Sand (NGVD 1929)	Bottom of PVC (ft bgs)	Screened Length (ft)	Solid PVC Length (ft bgs)	Coarse Sand Pack (ft bgs)	Fine Sand Pack (ft bgs)	Bentonite Chips (ft bgs)	Grout (ft bgs)	Elevation Top PVC (NGVD 1929)	Measured Depth (ft-TPVC)	Stick up (ft)	Comments
	SB-25D	1249933.9	597434.2	205.8	88.3	117.5	84.7	121.1	89.6	2	87.1	90 - 87	87 - 86	86 - 83	83 - 0	208.83	92.6	3.03	Series 2 - drainage sand
	SB-25D adjusted*	1249933.9	597434.2	207.8	90.3	117.5	86.7	121.1	91.7	2	89.2	92-89	89-88	88-85	85-2	211.40	95.3	3.6	Series 2 - drainage sand
I	SB-28D	1250040.0	596725.3	205.7	89.0	116.7	84.5	121.2	89.5	2	87.0	90 - 86.5	86.5 - 85.5	85.5 - 83	83 - 0	208.62	92.5	2.93	Series 2 - drainage sand
	SB-29	1249866.0	597614.4	204.2	86.7	117.5	81.5	122.7	87.5	10	77.0	87 - 74	-	74 - 72	soil	207.86	89.25	3.64	Series 1
	SB-01	1249803.8	597922.9	184.8	66.5	118.3	63.5	121.3	67.5	10	57.0	67.3 - 54	-	-	-	188.35	70.9	3.55	Series 1
	SB-02	1250147.3	598351.8	183.9	66.0	117.9	63.0	120.9	66.5	10	56.0	66.5 - 53	-	-	-	187.62	70.2	3.72	Series 1
	SB-03	1250682.8	597834.5	182.4	65.0	117.4	62.5	119.9	66.2	10	55.7	66.2 - 53	-	-	-	185.73	65.3	3.33	Series 1
	SB-05	1249764.6	598401.7	177.5	59.0	118.5	55.0	122.5	58.7	10	48.2	58.7 - 45	-	-	-	180.19	61.4	2.69	Series 1
	SB-15D	1249797.0	598218.8	181.7	64.7	117.0	57.6	124.1	65.3	2	62.8	65.3 - 62	62 - 60	60 - 57	57 - 0	184.44	68.0	2.74	Series 2 - drainage sand
П	SB-16D	1249796.9	598315.2	180.4	63.2	117.2	58.5	121.9	64.0	2	61.5	64 - 60.5	60.5 - 59.5	59.5 - 56.5	56.5 - 0	183.6	67.2	3.20	Series 2 - drainage sand
	SB-17D	1250512.1	598111.1	182.4	62.8	119.6	59.5	122.9	63.6	2	61.1	63.6 - 61.5	61.5 - 60.5	60.5 - 57.5	57.5 - 0	185.47	66.7	3.07	Series 2 - drainage sand
	SB-18D	1250501.7	598219.3	179.8	59.5	120.3	56.3	123.5	60.6	2	58.1	60.6 - 58	58 - 57	57 - 53	53 - 0	182.71	63.5	2.91	Series 2 - drainage sand
	SB-26	1249616.9	598539.2	145.3	26.0	119.3	23.5	121.8	25.6	10	15.1					148.36	28.6	3.00	Series 1
	SB-27	1249606.0	598582.8	135.1	14.5	120.6	12.5	122.6	15.6	10	5.1					138.11	18.51	2.91	Series 1
	SB-30	1249850.5	598143.7	185.8	68.0	117.8	61.0	124.8	68.5	10	58.0	68 - 55	-	65 - 63	soil	189.53	70.7	3.75	Series 1
	SB-19D	1250693.0	597033.6	200.4	86.2	114.2	81.5	118.9	87.3	2	84.8	87.3 - 84.5	84.5 - 83	83 - 80	80 - 0	203.06	89.9	2.66	Series 2 - drainage sand
ш	SB-19S	1250679.8	597036.8	200.0	NA	NA	77.5	NA	75.2	5	69.7	76.5 - 69	-	69 - 67	67 - 0	203.36	78.6	3.36	Series 2 - shallow
111	SB-20D	1250837.8	597321.7	190.0	75.0	115.0	70.5	119.5	75.2	2	72.7	75.3 - 71.5	71.5 - 71	71 - 69	69 - 0	192.86	78.1	2.86	Series 2 - drainage sand
	SB-24D	1250696.9	597654.7	186.1	68.5	117.6	65.2	120.9	69.8	2	67.3	70 - 67	67 - 66	66 - 63	63 - 0	188.82	72.6	2.72	Series 2 - drainage sand
VI	SB-21D	1250827.3	596433.6	191.3	78.3	113.0	71.5	119.8	78.9	2	76.4	78.9 - 75.5	75.5 - 73.5	73.5 - 70.5	70.5 - 0	194.30	81.9	3.00	Series 2 - drainage sand
VI	SB-22D	1250913.8	596382.9	190.0	76.8	113.2	71.6	118.4	77.6	2	75.1	77.6 - 75	75 - 73.5	73.5 - 70.5	70.5 - 0	193.05	80.6	3.05	Series 2 - drainage sand
IV	SB-23D	1250642.4	596444.3	196.5	83.2	113.3	79.0	117.5	84.0	2	81.5	84 - 81.5	81.5 - 80.5	80.5 - 78.5	78.5 - 0	199.70	87.2	3.20	Series 2 - drainage sand
IV	SB-23S	1250636.7	596455.0	196.4	NA	NA	NA	NA	77.3	5	71.8	77.5 - 70	-	70 - 68	68 - 0	199.45	80.3	3.05	Series 2 - shallow

Table 1 - Boring and Piezometer Installation Data Southeast County Landfill

Notes:

*Additional waste and soil was added to area surrounding SB-25D after installation, therefore PVC riser was extended and ground and Top PVC elevations changed.

SB-29 and SB-30 contain sediment

Borings SB-14 through SB-25 and SB-28 through SB-30 drilled using hollow stem augers.

Borings SB-26 and SB-27 drilled using _____

Series 1 indicates the piezometer not isolated in discreet interval.

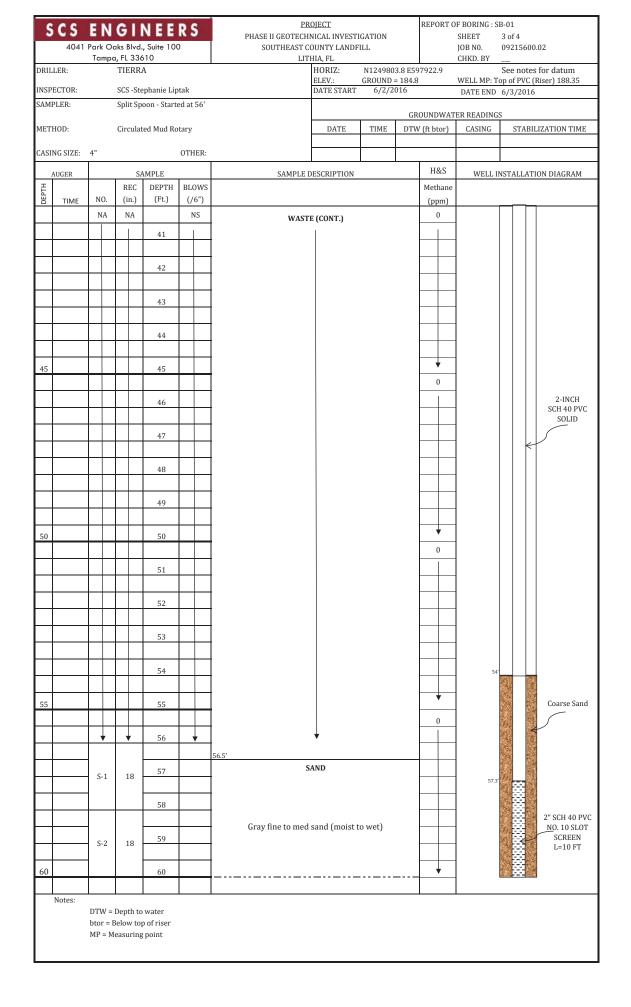
Series 2 indicates the piezometer isolated in discreet interval, either drainage sand or waste .

"D" denotes deep piezometer, "S" denotes shallow piezometer.

Need to check field notes Estimated - no survey data

S					I E E I Suite 100			<u>PR</u> PHASE II GEOTECH SOUTHEAST C				REPORT C	F BORING : SHEET JOB NO.	1 of 4	5600.02
		Та		FL 336 TIERR				LIT	HIA, FL				CHKD. BY		
DRIL									HORIZ: ELEV.:	N124980 GROUND	= 184.8		WELL MP: 1		otes for datum VC (Riser) 188.35
	ECTOR:				ephanie Lip		F (1		DATE START	6/2/2	016		DATE END	6/3/2	2016
AM	LER:			Split Sp	oon - Start	ed at	50				GR	OUNDWAT	ER READING	GS	
METI	HOD:			Circulat	ted Mud Ro	tary			DATE	TIME	DTW	/ (ft btor)	CASING	ST	ABILIZATION TIME
CASII	NG SIZE:	4"				OTH	IER:							+	
		T						CAMPLE	Deepuptrion			H&S			
	AUGER			REC	AMPLE DEPTH	BL	ows	SAMPLEI	ESCRIPTION			Methane	WELL		LATION DIAGRAM Stick-up = 3.55
DEPTH	TIME	N	10.	(in.)	(Ft.)	(/	'6")					(ppm)			
		1	NA	NA		1	١C	S	AND			0			BENTONITE (TYP)
					1										
								Brown sand with some	organic mater	rial and sod					(TYP)
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	Notes:	1		I	I	I						1	1		
				Depth to	o water p of riser										
		MF	e = Me	easuring	g point										
		SA	MPLE	E DESCR	IPTIONS -	base	d on o	bserved cuttings from drilling	fluid when no	split spoon	n collect	ed.			

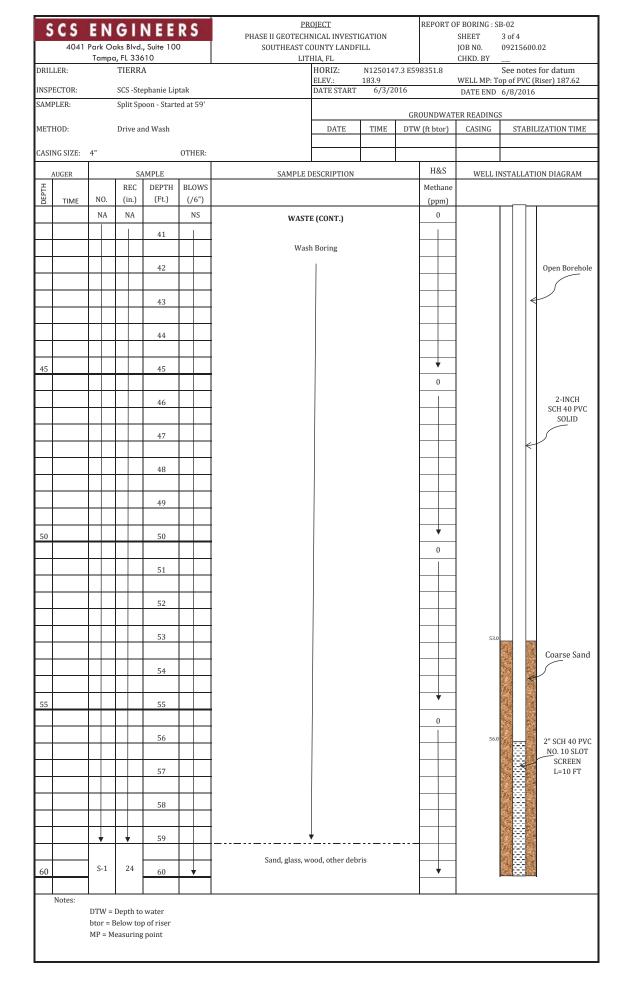
S		Par	k Oo	aks	Blvd.	NEE , Suite 100		S	PHASE II GEOTECHN SOUTHEAST CO	OUNTY LANDF			REPORT (DF BORING : S SHEET JOB NO.	2 of 4	6600.02
DRIL	LER:	To	mpo		. 336 ERR/					HIA, FL HORIZ:	N124980	3.8 E59	7922.9	CHKD. BY	See n	otes for datum
	ECTOR:					ephanie Lip	tak				GROUND = 6/2/2	= 184.8			op of P	VC (Riser) 188.35
	PLER:					oon - Starte		56'		DATESTART	0/2/2	010		DATE END	6/3/2	016
														ER READING	1	
METI	HOD:			Cir	culat	ed Mud Ro	tary			DATE	TIME	DTW	/ (ft btor)	CASING	ST.	ABILIZATION TIME
CASI	NG SIZE:	4"					ОТН	IER:								
	AUGER				SÆ	AMPLE			SAMPLE D	ESCRIPTION			H&S	WELL I	NSTALI	LATION DIAGRAM
DEPTH				R	EC	DEPTH	BLC	ows	-				Methane		-	
DEF	TIME	-	0.		in.)	(Ft.)		6")					(ppm)			1
		Ν	λA	1	NA		N	IA	WAST	E (CONT.)			0	-		
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]	Notes:	bto	r = I	Belo	w top	water p of riser ng point										



SAMI	4041 LER: ECTOR: PLER:	Park O	aks Blvd. a, FL 336 TIERRA SCS -Ste Split Sp Hydrau	A ephanie Lip oon - Starte lic Hamme) tak ed at 56' r	PHASE II GEOTECH SOUTHEAST C	OUNTY LANDF HIA, FL HORIZ: ELEV.: DATE START	ILL N124980 GROUND 6/2/2	= 184.8 016 GR	07922.9 OUNDWAT	DATE END	4 of 4 09215600.02
METH	HOD:		Circulat	ed Mud Ro	tary		DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
CASII	NG SIZE:	4"			OTHER:	1				1		
	Casing			MPLE		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	NO.	REC (in.)	DEPTH (Ft.)	BLOWS (/6")					Methane (ppm)		
						SAND	(CONT.)			0		
				61								
		S-3	18	62								Coarse Sand
												臺
				63							-	鼍
		-		64		Gray fine to med	sand (moist t	o wet)				Coarse Sand
		S-4	18	04							-	
65				65						+		囊
										0		2" SCH 40 PVC NO. 10 SLOT
		-		66		Gray sand mixed with silt (We	et)				-	SCREEN L=10 FT
		S-5	6	(5		66.5'	LAY				-	PVC End Cap
		-		67							67.5	L=6
				68		1						BENTONITE
		T-1	24			White silty c	lay (Phosphatic	:)				(TYP)
		-		69								
						ROF	= 69.5'			↓		
	votes: - ADVANC - BOTTOM	ED TO 6 1 OF PIE:	9.5' TO (ZOMETE	COLLECT CI R SET AT 6	LAY SAMF 7.3 DUE 1	PLES FOR GEOTECHNICAL INV 'O SWELLING CLAY						
		btor = H	Depth to Below top easuring	o of riser								

SCS 4041	Park C	aks Bl		ite 100			PHASE II GEOTECHNICA SOUTHEAST COUNT LITHIA, I	ΓY LANDFI				SHEET JOB NO. CHKD. BY	1 of 4 0921560	0.02
RILLER:			RRA				HOI	RIZ:	N125014	7.3 E598	8351.8			s for datum
NSPECTOR:		SCS	-Steph	anie Lip	tak		ELE	V.: TE START	183.9 6/3/2	016		DATE END		(Riser) 187.62
AMPLER:				n - Starte		59'								
IETHOD:			raulic l ve and V	Hammer Wash	r			DATE	TIME		(ft btor)	ER READING CASING	1	LIZATION TIME
illinob.		DIII	e ana	vv asii				DITL	TIME	DIW	(it btor)	Choirte	51110	
ASING SIZE:	4"				OTH	IER:								
CASING			SAMI	PLE			SAMPLE DESCI	RIPTION			H&S	WELL I	NSTALLAT	'ION DIAGRAM
DE D	NO.	RI		DEPTH (Ft.)		OWS					Methane			Stick-up = 3.7
	NO.	(ir N	-	(rt.)		6") IC	SAND				(ppm) 0			8
	1													
				1			Brown sand with some orga	anic materi	ial and sod		-			
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Notes:	DTW	= Dept	h to wa	ater										
				f riser										

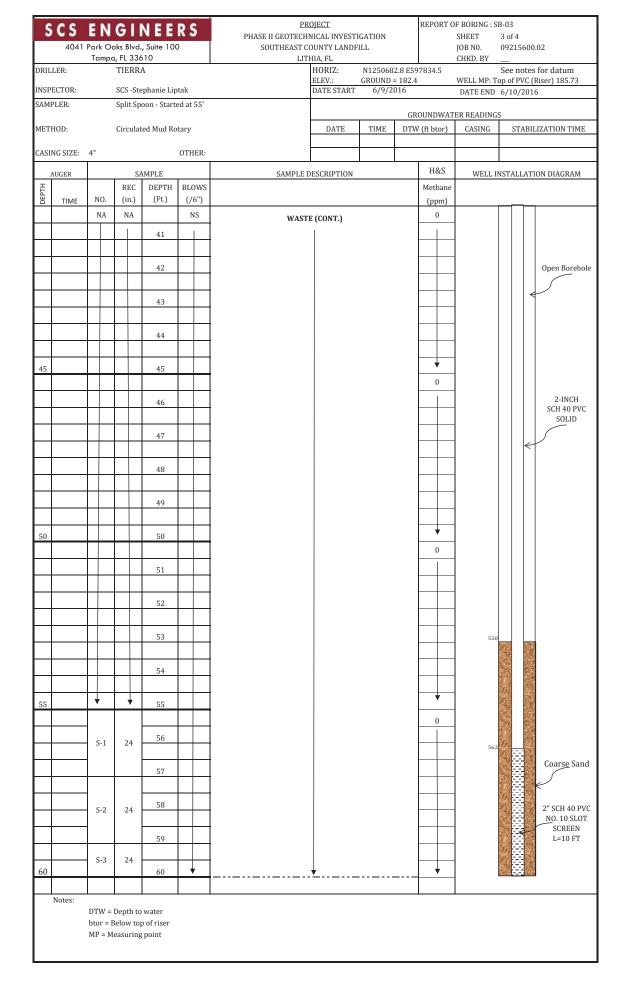
S			aks	Blvd.	NEE , Suite 100		S	PHASE II GEOTECH SOUTHEAST C	<u>OJECT</u> NICAL INVESTI OUNTY LANDF HIA, FL				F BORING : S SHEET JOB N0. CHKD. BY	B-02 2 of 4 0921560	0.02		
DRII	LER:	rump		ERR/				LII	HORIZ:	N125014	7.3 E59	98351.8			s for datum		
INSP	ECTOR:		SC	S -Ste	phanie Lip	tak			ELEV.: DATE START	183.9 6/3/2	016		WELL MP: T DATE END		(Riser) 187.62		
SAM	PLER:		Sp	lit Sp	oon - Start	ed at	t 59'										
MET	HOD:		Cir	culat	ed Mud Ro	tarv			DATE	TIME		/ (ft btor)	ER READING CASING		LIZATION TIME		
												(110101)					
CASI	NG SIZE:	4"				OTI	HER:	r									
	AUGER		Т		MPLE	r		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLAT	ION DIAGRAM		
DEPTH	TIME	NO.		REC in.)	DEPTH (Ft.)		0WS /6")					Methane (ppm)					
		NA	-	NA			NA	WAST	E (CONT.)			0					
					21				2 (00.11)								
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S	C S 4041	Park O		NEE ., Suite 100	1. S. C. A. C. S.	PHASE II GEOTECHI SOUTHEAST C				REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	SB-02 4 of 4 09215600.02
DRIL	LER:		TIERR	A			HORIZ:	N125014	7.3 E5	98351.8		See notes for datum
INSP	ECTOR:		SCS -Ste	ephanie Lip	otak		ELEV.: DATE START	183.9 6/3/2	016			Fop of PVC (Riser) 187.62 6/8/2016
SAMI	PLER:		Split Sp	oon - Start	ed at 59'				CT	OUNDWAT	ER READINC	20
METI	HOD:		Drive a	nd Wash			DATE	TIME		V (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4"			OTHER:							
I	AUGER		SA	AMPLE		SAMPLE D	ESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM
DEPTH	TIME	NO.	REC (in.)	DEPTH (Ft.)	BLOWS (/6")					Methane (ppm)		
			NA		NC	WAST	E (CONT.)			0		器
				61								囊
Ш												· 喜
		S-2	24	62		Sand, glass, w	ood, other deb	ris				Coarse Sand
		4										
		<u> </u>		63		63.0'						2" SCH 40 PVC
		-				S.	AND					NO. 10 SLOT SCREEN
		S-3	24	64								L=10 FT
		-				Gray fine to med	sand (moist to	wet)				署
65				65		druy me to meu	suna (monse to	(incl)		*		薑
\square		-								0		PVC End Cap
\vdash		T-1	24	66	-	66.0'	1 437			++-	66.	• L=6"
\vdash		-					LAY				66.	5
				67								
		-				White silty cl	ay (Phosphatio	:)				
\vdash		-	0	68		-						Bentonite
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Н		T-1	24	70	$\left \right $	•				\vdash		
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Н		1	1	71	1	RO	E = 71'			1		
	- BO	VANCED	F BORIN F PIEZON DTW =	G BACKFIL	LED WITH ET AT 66.5 rater	LES FOR GEOTECHNICAL INVE H BENTONITE 5 DUE TO SWELLING CLAY						
			MP = M	easuring p	oint							

	41 Par	k Oa		NEEI , Suite 100			PHASE II GEOTECH SOUTHEAST C				REPORT	F BORING : S SHEET JOB NO. CHKD. BY	1 of 4 0921560	00.02
RILLER:			TIERR					HORIZ:	N125068					es for datum
NSPECTOR:			SCS -St	ephanie Lip	otak			ELEV.: DATE START	GROUND 6/9/2			WELL MP: T DATE END		(Riser) 185.73
AMPLER:			Split Sp	oon - Start	ed at	55'		SHEDIAN	, . , =					
				ılic Hamme						1		ER READING		
IETHOD:			Circula	ted Mud Ro	otary			DATE	TIME	DTW	/ (ft btor)	CASING	STAE	BILIZATION TIME
ASING SIZE	4'				OTH	IER:								
						-		I	I	I	H&S		1	
CASING I	+		S. REC	AMPLE DEPTH	DI	ows	SAMPLE I	DESCRIPTION			Methane	WELL I	NSTALLA	TION DIAGRAM Stick-up = 3.33
DEPTH IMIT		NO.	(in.)	(Ft.)		0ws '6")					(ppm)			ap = 0.00
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				1			Brown sand with some	organic mater	ial and sod	l		-		(TYP)
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Notes:	D'	ГW =	Depth to	o water										
	bt	or = E	Below to	p of riser										
	м	P = M	easuring	g noint										

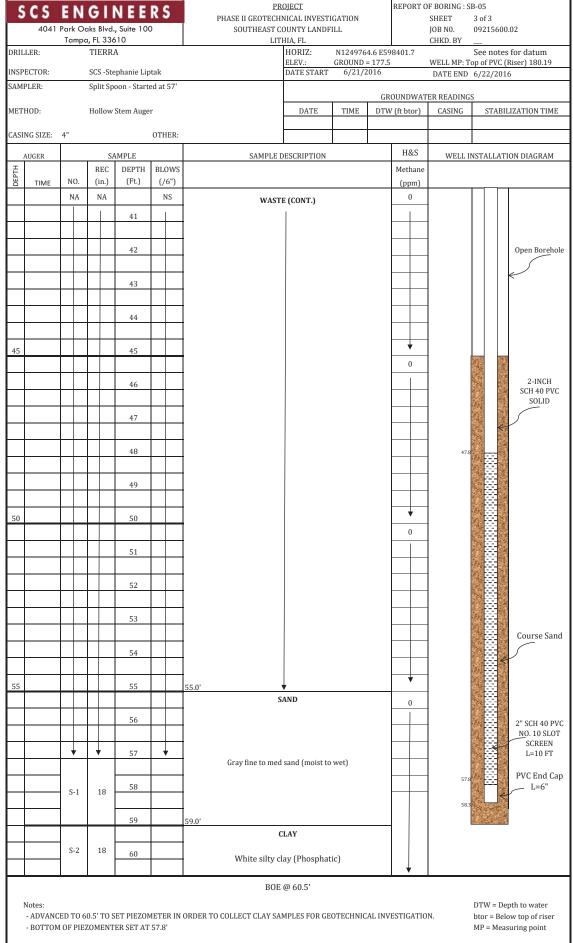
S	and a subscription of	Par	k Oo	aks	Blvd.	NEE ,, Suite 100		5	PHASE II GEOTECHN SOUTHEAST CC	UNTY LANDF			REPORT (DF BORING : S SHEET JOB N0.	B-03 2 of 4 09215		02
DRIL	LER:	To	mpo		. 336 ERR/					IIA, FL HORIZ:	N125068	2.8 E59	7834.5	CHKD. BY	See n	otes	for datum
	ECTOR:					ephanie Lip	tak				GROUND 6/9/2	= 182.4			op of P	VC (R	iser) 185.73
	PLER:					oon - Starte		55'		DATESTART	0/ 5/ 2	010		DATE END	6/10/	2016	
														ER READING	1		
METI	HOD:			Cir	culat	ed Mud Ro	tary			DATE	TIME	DTW	/ (ft btor)	CASING	ST	ABIL	ZATION TIME
CASI	NG SIZE:	4"					OTH	IER:									
	AUGER				SÆ	AMPLE			SAMPLE D	ESCRIPTION			H&S	WELL I	NSTAL	LATIO	ON DIAGRAM
DEPTH				R	EC	DEPTH	BLO	ows					Methane		-		
DEF	TIME	-	0.		in.)	(Ft.)		6")					(ppm)				
		N	λA	1	NA		N	IA	WASTE	(CONT.)			0	-			
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														-			
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						29											
30						30							+	1			
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10						10								1			
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S		Park Oc		NEE ., Suite 100		PHASE II GEOTECH SOUTHEAST C				REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	GB-03 4 of 4 09215600.02
DRII	LER:		TIERR	A			HORIZ:	N125068			WELL ND 7	See notes for datum
INSP	ECTOR:		SCS -Ste	ephanie Lip	otak		ELEV.: DATE START	GROUND 6/9/2				Cop of PVC (Riser) 185.73 6/10/2016
SAM	PLER:		Split Sp	oon - Start	ed at 55'							
MET	HOD:		Circulat	ted Mud Ro	tary		DATE	TIME		OUNDWAT / (ft btor)	ER READING CASING	S STABILIZATION TIME
CASI	NG SIZE:	4"			OTHER:							
	AUGER		SA	AMPLE		SAMPLE I	DESCRIPTION	•		H&S	WELL I	INSTALLATION DIAGRAM
DEPTH	TIME	NO.	REC (in.)	DEPTH (Ft.)	BLOWS (/6")					Methane (ppm)		
	THVIE	S-3		. ,	0.5	WAST	E (CONT.)			0		
		(cont.)	24	61		WASI						王
				01								
		1		62								Coarse Sand
			0	02			Ļ					
				63		62.5' S	AND					
				03								2" SCH 40 PVC NO. 10 SLOT
		1		64		Gray fine to med	cand (maint t	o				SCREEN L=10 FT
		S-4	24	01		dray fille to filed	sanu (moist i	0 welj				
65				65		65.0'				•		
05				05			LAY			0		薯
				66						1		PVC End Cap
		1		00							66.	1. (A)
		T-1	24	67		White silty c	lay (Phosphati	:)			66.	7
				07								
		1 OF PIE2 DTW = 1 btor = E	COMETE Depth to	R SET AT 6 water p of riser		ORDER TO COLLECT CLAY SA 'O SWELLING CLAY	BOE = 67.5' MPLES FOR GE	OTECHNIC	AL INV	ESTIGATIO	N.	

SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610								PROJECT PHASE II GEOTECHNICAL INVESTIGATION SOUTHEAST COUNTY LANDFILL LITHIA, FL				REPORT OF BORING : SB-05 SHEET 1 of 3 JOB NO. 09215600.02 CHKD. BY			
DRII	LER:	ramp		. 336 IERR				LITI	HIA, FL HORIZ:	N124976	4.6 E59			See notes for datum	
									ELEV.:	GROUND	= 177.5		WELL MP: To	op of PVC (Riser) 180.19	
INSPECTOR: SCS -Stephanie Liptak SAMPLER: Split Spoon - Started at 57'									DATE START	6/21/2	010		DATE END	6/22/2016	
SAMPLER: Split Spoon - Started at 57 Hydraulic Hammer											GR	<u>OUNDWA</u> T	ER READING	<u> </u>	
MET	HOD:		Н	ollow	Stem Auge	r			DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME	
CAST	NC SIZE	4"				0777	160								
CASI	NG SIZE:	4				OTH	1EK:								
	CASING		-		AMPLE	r –		SAMPLE D	ESCRIPTION			H&S	WELL I	ISTALLATION DIAGRAM	
DEPTH		NO.		REC (in.)	DEPTH (Ft.)		OWS					Methane		Stick-up = 2.69'	
ā	TIME	NO.	-	(in.) NA	(rij		6") 1C	c	AND			(ppm) 0			
\vdash		INA	+	inA			NL.		1111			U 			
L-		++	+	-	1	-	-	Brown sand with some	organic mater	ial and sod				BENTONITE (TYP)	
								brown sand with some	organic mater	iai allu sou					
					2	_		2'							
								W	ASTE						
					3										
														Open B <u>or</u> ehole	
			Ì		4			Bulk Auger C	uttings of MSW	/					
			\uparrow					1							
-					-							•			
5			+	-	5			4				_			
-			+			-						0		2-INCH	
		++	_		6	-								SCH 40 PVC	
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	Notes:			.1 .										· · ·	
1					water p of riser										
1		MP =	Meas	suring	g point										
1		SAMP	LE D	ESCR	IPTIONS - I	based	i on c	observed cuttings from auger w	vhen no split sp	oon collec	ted.				

: 4 E: 4 E	NO. NA	Split	A ephanie Lip ooon - Start Stem Auge AMPLE DEPTH (Ft.)	ed at 57'		HIA, FL HORIZ: ELEV.: DATE START DATE	N124976 GROUND 6/21/2	4.6 E598401. = 177.5 2016	WELL MP: T	See notes for datum 'op of PVC (Riser) 180.19		
E: 4	NO.	Split	AMPLE DEPTH	ed at 57' er		DATE START	6/21/2	2016		op of LAC (VISGL) 100.18		
	NO.	Hollow S REC (in.)	AMPLE	er		DATE			2	6/22/2016		
	NO.	S REC (in.)	AMPLE DEPTH			DATE		CD C C C C C C C C C C				
	NO.	S REC (in.)	AMPLE DEPTH			DATE	TIME	GROUND DTW (ft bt	WATER READING or) CASING	STABILIZATION TIM		
	NO.	REC (in.)	DEPTH	OTHER:			TIME		JIJ CASING	STABILIZATION TIM		
E		REC (in.)	DEPTH									
E		(in.)			SAMPLE DESCRIPTION				S WELL I	WELL INSTALLATION DIAGRAM		
			(Ft.)	BLOWS				Meth	ane			
	NA	NA	1 .	(/6")				(pp				
				NA	WAST	E (CONT.)		0				
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			26							2-INCH		
										SCH 40 PV0 SOLID		
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		DTW = btor = E	DTW = Depth to btor = Below to	38 38 39	38 38 39 ↓ 40 ↓	DTW = Depth to water btor = Below top of riser	DTW = Depth to water btor = Below top of riser	DTW = Depth to water btor = Below top of riser	DTW = Depth to water btor = Below top of riser	DTW = Depth to water btor = Below top of riser		



SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610							S	PHASES I-VI LIQUID ASSESSMENT MONITORING SOUTHEAST COUNTY LANDFILL					REPORT OF BORING : SB-15D SHEET 1 of <u>4</u> JOB NO. 09215600.03			
DRIL	LER:	Tam	-		610 A - Derek,	Cru	z. an		THIA, FL HORIZ:	N124979	7.0 E598	3218.8	CHKD. BY	 See notes for datum		
						Gru	2, un	u ben	ELEV.:	GROUND :	= 181.7	210.0	WELL MP: To	op of PVC (Riser) 184.44		
	ECTOR:				Devitt	1.	501		DATE START	2/16/	2017		DATE END	2/20/2017		
SAM	PLER:				oon - Start Ilic Hamme		53				GI	ROUNDWAT	ER READING	S		
METHOD: Hollow -Stem Auger (HSA)							SA)		DATE	TIME		(ft btor)	CASING	STABILIZATION TIME		
CASI	NG SIZE:	4-1/4	4" I.D.	& 8-1/	'4" O.D.	OTH	HER:	CME 55 Drill Rig				1				
	AUGER			S	AMPLE			SAMPLE	DESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM		
DEPTH				REC	DEPTH		ows					Methane		Stick-up = 2.74'		
DE	TIME	NO		(in.)	(Ft.)		'6")					(ppm)		03		
	11:11	NA	ł	NA		NS		-	SAND			0				
					1											
								Brown sand with o	organic materia	l and sod						
					2			2'						GROUT (TYP)		
								, in the second s	WASTE							
			\uparrow		3			1								
		$\uparrow \uparrow$	+	+	5	╞	-	1								
		+	+	+		\vdash	-	Black and brown fine silty sa		with plasti	c, paper,	\vdash				
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	11:26	\parallel	+	_		-	-	4				0				
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								-						SOLID		
					7			_								
								Black fine silty sand interr						e		
					8			paper, organics, wood	l, tire shreds) (d	lry to mois	t)					
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	11:41											0				
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			-	-				Black fine silty sand inter	mixed with plas [moist]	stic, paper,	wood					
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		$\left \right $	+	+		-	-	-				\vdash				
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					17			1								
								Black fine silty sand inter		stic, paper,	wood			1		
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20	11:52	╞┼	+	Ţ	20	Ι,	+	1				•				
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					water											
					p of riser g point											
						based	d on o	observed cuttings from auger v	when no split sp	oon collec	ted.					

SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610					, Suite 10		S	PROJECT PHASES I-VI LIQUID ASSESSMENT MONITORING SOUTHEAST COUNTY LANDFILL LITHIA, FL					REPORT OF BORING : SB-15D SHEET 2 of 4 JOB N0. 09215600.03 CHKD. BY			
DRIL	LER:				A - Derek,	Cru	z, and		HORIZ:	N124979				See notes for datum		
INSPECTOR: SCS - C. Devitt								ELEV.: GROUND = 181.7 DATE START 2/16/2017			7 WELL MP: Top of PVC (Riser) 184.44 DATE END 2/20/2017					
	PLER:				oon - Start	ed at	: 53'			, .,	-	DATE END 2/20/2017				
					lic Hamme						G	ROUNDWA	TER READING	GS		
MET	HOD:	Hollow -Stem Auger (HSA)					ISA)		DATE	TIME	DTV	V (ft btor)	CASING	STABILIZATION TIME		
CASI	NG SIZE:	4-1/4"	I.D. 8	& 8-1/4	4" O.D.	OTI	HER:	CME 55 Drill Rig				r				
	AUGER			SA	AMPLE			SAMPLE I	DESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM		
DEPTH			REC		DEPTH		BLOWS					Methane				
DEI	TIME	N0.	((in.)	(Ft.)	(/	/6")					(ppm)				
	11:56	NA		NA		1	NS	WAST	E (CONT.)			0				
				1	21											
													-			
		++	+	1	22	1		1					-	CDOUT (TRUD)		
		++	+	+	22	\vdash		1				\vdash	-	GROUT (TYP)		
								Diagle fing ailter and in t	durad unleb	n mla-+!-	n okc ¹	\vdash	-			
		++	+	-	23	<u> </u>			Black fine silty sand intermixed with paper, plastic, metal wire (moist)				-			
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		+	+	-		-		4				\vdash	-	SOLID		
		+	+	_	27			4				\vdash	-			
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					28			wire	(moist)				_			
					29									御 を		
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50			+		50							0	-			
	12:17	++	+	+				-					-			
			+	-	31	-		-					-			
			+			-		-					-			
			_	_	32	-		-					-			
			_					Black fine silty sand intern			tire		-			
				_	33	<u> </u>		snreas, wood,	organics (mois	i j			-			
		34														
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		+	+	-	37	┝		4				\vdash	-			
	L	++	+	-		<u> </u>	-	Black fine silty sand interm metal w	ixed with plast rire (moist)	ic, paper, v	vood,	\vdash	-			
		+	+	_	38			metal w				\vdash	-			
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40	14:34			↓	40	,	↓]				•				
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					water											
		btor = MP = I			o of riser											
		1*1F = [-ied5	, ar ifig	point											

SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610				d., Suite 10		PR PHASES I-VI LIQUID AS SOUTHEAST C LIT	REPORT OF BORING : SB-15D SHEET 3 of 4 JOB NO. 09215600.03 CHKD. BY						
RILL	LER:		TIERI	RA - Derek,	Cruz, a		HORIZ:	N1249797		8218.8			notes for datum
NSPE	CTOR:		SCS - C	. Devitt			ELEV.: DATE START	GROUND = 2/16/2			WELL MP: DATE EN	Top of D 2/2	PVC (Riser) 184.44 0/2017
AMP	LER:		Split S	poon - Start	ed at 53'								
				ulic Hamme							TER READ		
1ETH	IOD:		Hollov	v -Stem Aug	er (HSA)		DATE	TIME	DTW	(ft btor)	CASING	-	STABILIZATION TIME
ASIN	IG SIZE:	4-1/4"	I.D. & 8	-1/4" O.D.	OTHER	CME 55 Drill Rig						+	
	UGER			SAMPLE		SAMDI F I	DESCRIPTION			H&S	WEI	LINST	ALLATION DIAGRAM
	oun		REC	DEPTH	BLOW					Methane			
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)			
	14:40	NA	NA		NS	WAST	E (CONT.)			0			
				41									
												438	
				42									GROUT (TYP)
				43		Black fine silty sand intermin		organics, pl	lastic,				
						paper, tire	shreds (moist)						
				44									
45	14:53			45						+]		10
	15:17]				0		38	
				46]					1	15	2-INCH
												82	SCH 40 PVC SOLID
				47									
						Black fine silty sand intermix	ed with fabric.	organics, pl	lastic.				*
				48			shreds (moist)	. 0,1					
						1							
				49		1							
						1						13	進
50	15:36			50		1				+			
	15:43									0	-	1,22	
	10.10			51		-				Î			
						Black fine silty sand interm	uixed with fabri	wood na	ner				
				52			ganics (moist)	, 1100u, pu	per,			28	
				52		-					-		
+	15:49	•	+	53		-					-		
	15:57			35	10	Start Split Spo	on sampling at 5	53'			-		
+	15.57			54	7	1					-		
		S-1	0	34	1	No r	ecovery				-		100
55	15:59	1		55	16 12	1							
.,	16:08			55	9	Black fine silty sand mixed		stic bags, w	rood -	0	1		
+	10.00	1		56	18	1	noist) Vood						
+		S-2	14	50	8	1					<u></u> <u>−</u>		
+	16.00	1		E7	9	Gray sand and black fine silt organ	y sand mixed wi iics (wet)	th wood, pl	lastic,			7.0	
+	16:09 16:21			57	20	<u>-</u> -					- 5	7.0	
+	10:21	1		F0		Black fine silty s	ana ana wood ('	wetj					Bentonite Chij
+		S-3	10	58	13	57.6' S	AND						(typ.)
+	16.22	1		50	19	1							
+	16:23			59	21	Grav fine	e sand (wet)						
-	16:38	S-4	19	(0)	25								
50				60	23					•	é	0.0	
<u> </u>	Notes:	1			1	1							
-	-			o water									
		btor = E	Below to	op of riser									

Note: Note: Note: DW = Depth to water tor of offer	S	CS	F N	GII	NEE	PS						REPORT OF BORING : SB-15D			
Temps, N. 3300 LTTUL /L CILLO Y DELLAR: TERRA - Device, Cruz, and Ben DIAZ CLUZYTZE 200721 DIAZ SECTOR: SS C. Device DIAZ CLUZYTZE 200721 DIAZ															
INSPECTOR SIX-C. Dovert CLOWER CLOWER 12, 21/4/2017 VEX.445.772,01/97 (2017) VEX.455.772 SMMFSR: Split Speca-Started at S7 Split Spl			Tampa	, FL 336	510		LITHIA, FL								
INSPECTOR: SG C: Detert DATE TAIL	DRIL	LER:		TIERR	A - Derek,	Cruz, and						WELL MP: T			
INTER: NAME: NAME: NAME: CANCE	INSP	ECTOR:													
NETTIOD: Isolew -Seen Asper (186) DATE TIME DTW (19 aux) CASING SEE 4-1/4* AUGUAR SAMPLE SAMPLE SAMPLE DISCUPTION IREA IREA IREA AUGUAR SAMPLE SAMPLE DISCUPTION IREA IREA IREA IREA AUGUAR SAMPLE DISCUPTION IREA IREA IREA IREA IRE	SAM	PLER:					CI				OUNDWAT	TED DEADINGS			
Autoria SAMPLE SAMPLE SAMPLE SAMPLE DISCRPTION HBAS WELL INSTALLATION MAGBAM 5 Tote Res DIPTI BLOWS Herbit Herbit Herbit 1 64 13 37 SAND (CONT) 0 Herbit Herbit 1 1641 41 42 1 Gi 42 1 Gi	MET	HOD:		-				DATE	TIME						
Autoria SAMPLE SAMPLE SAMPLE SAMPLE DISCRPTION HBAS WELL INSTALLATION MAGBAM 5 Tote Res DIPTI BLOWS Herbit Herbit Herbit 1 64 13 37 SAND (CONT) 0 Herbit Herbit 1 1641 41 42 1 Gi 42 1 Gi															
Notes: Description Description <thdescription< th=""> <thdescription< th=""> <thd< td=""><td>CASI</td><td>NG SIZE:</td><td>4-1/4" I</td><td>.D. & 8-1</td><td>L/4" O.D.</td><td>OTHER:</td><td>CME 55 Drill Rig</td><td></td><td></td><td></td><td></td><td></td><td></td></thd<></thdescription<></thdescription<>	CASI	NG SIZE:	4-1/4" I	.D. & 8-1	L/4" O.D.	OTHER:	CME 55 Drill Rig								
Nets: 100 </td <td></td> <td>AUGER</td> <td></td> <td></td> <td></td> <td></td> <td>SAMPLE D</td> <td>ESCRIPTION</td> <td></td> <td></td> <td>H&S</td> <td>WELL I</td> <td>NSTALLATION DIAGRAM</td>		AUGER					SAMPLE D	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM		
Nets: 2000 3.7 4.4 4.3 9.21 5.5 2.2 6.2 2.3 6.5 7.5 7.4 6.6 0.0 7.5 7.4 0.0 </td <td>ЕРТН</td> <td></td> <td>NO</td> <td></td>	ЕРТН		NO												
Note: 800 (CMI) 0 <	ā	TIME	NU.	(III.)	(rt.)							60.0			
021 5.5 22 02 62 02 025 03 68 0 02	\vdash		S-4	19			SAND	(CONT)					Fine Sand		
Nets: DUE DUE CAN Control Cap Lie Nets: DP 25 100 distribution at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began new boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began here boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began here boring -10° south of original location of SB-150 htt obstration at 20°. Relocated and began here boring -10° south of original location of SB-150 h					61										
Notes: D02-67 • 0405 0-67 • 0405 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-67 • 0406 0-7 • 0407 0-67 • 0408 0-67 • 0408 0-67 • 0408 0-67 • 0408 0-67 • 0409 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008 0-7 • 04008<		9:21													
0.25 0 63 68 Ught gray/tan fine sand (vet) 0 0.2 2* SCH 40 PV(NU BS SCH 40 PV(NU BS SCH 40 PV(NU BS SCH 40 PV(NU BS SCH 40 PV(End Cap Letter)) 0.46 65 9 64.7 CLAY 0 0 0.2 0.0			S-5	22	62	25						62.0	Coarse Sand		
0-22 00 <						42									
Vites: 0.01		9:25			63	68	Light gray/tai	n fine sand (we	t)			62.8	1210		
Notes: DTW = Depth to water bit construction at 201: Relocated and began new boring = 10" south of original Notes: DTW = Depth to water bit = distribution of siter		9:45				8									
0.46 65 0 0.7 CLAY 0 0.0<			S-6	26	64	15									
Notes: Notes: Notes: DTW = Depth to water bor = 800 mit						8									
10:00 5.7 24 6 2 Cray sity clay (vet) Nee: B0:67 • • • • • • • • • • • • • • • • • • •		9:46			65	9						64.8	PVC End Cap L=6"		
S:7 23 2 Gray sity clay (wet) Nets: B0E=67' - ADVARCED AUGERS TO 67' TO SET PIEZOMETER COLLECTED SFUT SPOOR FROM 65'-67' TO CONFIRM CLAY. - BUTTOM OF PVC.EDD C/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.		10:00	2 CLAY						65.4	K					
S:7 23 2 Gray sity clay (wet) Nets: B0E=67' - ADVARCED AUGERS TO 67' TO SET PIEZOMETER COLLECTED SFUT SPOOR FROM 65'-67' TO CONFIRM CLAY. - BUTTOM OF PVC.EDD C/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PRE-PACKID SCREEM SET -05'. INTO CLAY. - BUTTOM OF PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.EDD LC/P AND PVC.					66	2									
10:01 67 4 B0E=67" • APANACED AUGERS TO 67" TO SET PIEZOMETER. COLLECTED SPLT PROOF REM 65"-67" TO CONFIRM CLAY. • DOTTOM OF PVC EMB 02 22/17/ USING MORSOON SUBMERING REMOVED ~25 GALLONS. Initial location of SB-15D hit obstruction at 20". Relocated and began new boring ~10" south of original location- set piezometer. • Description of the set piezometer. Note: DTW = Depth to water by the set of the set			5-7	24		2	Gray silt	/ clay (wet)							
Notes: B0E-67' - ADVANCED AUGERS TO 67' TO SET PIEZOMETER. COLLECTED SPLIT SPON FROM 65'-67' TO CONFIRM CLAY. - BOTTOM OF PVE END CAP AND PRE-PACKED SCREEN SET- 63' INTO CLAY. - BOTTOM OF PVE END CAP AND PRE-PACKED SCREEN SET- 63' INTO CLAY. - BOTTOM OF PVE END CAP AND PRE-PACKED SCREEN SET- 63' INTO CLAY. - BOTTOM OF PVE END CAP AND PRE-PACKED SCREEN SET- 63' INTO CLAY. - BOTTOM OF PVE END CAP AND PRE-PACKED SCREEN SET- 63' INTO CLAY. - Initial location of SB-15D In bothruction at 20'. Relocated and began new boring ~ 10' south of original location- set piezometer. - Dottom of PVE SIN CLAY. Notes: DTW = Depth to water - Difference DTW = Depth to water borr Bothructon of riser Notes: DTW = Depth to water More = Medward point - Difference		10:01			67						+				
DTW = Depth to water btor = Below top of riser MP = Measuring point					it obstructi	ion at 20'.	Relocated and began new bori	ng ~10' south	of original						
BOE = Bottom of exploration		Notes:	btor = B MP = Me	elow top easuring	o of riser point	on									

S	C S 4041	Park	Οa		vd.,	Suite 10		S	PHASES I-VI LIQUID A SOUTHEAST (COUNTY LAND		١G	REPORT O	F BORING : S SHEET JOB NO.	B-16D 1 of <u>4</u> 0921560	0.03
DRILI	LER:	Ian	-			- Derek	and	Ben		THIA, FL HORIZ:	N124979	96.9 E598	315.2	CHKD. BY	See note	s for datum
INCDE	ECTOR:			srs -	C D	Devitt				ELEV.:	GROUND	= 180.4				(Riser) 183.6
SAMP						on - Start	ed at	50'		DATE START	2/14,	/2017		DATE END	2/15/20	17
	BBR					c Hamme		00				GRO	DUNDWATE	R READINGS		
METH	HOD:			Hollo	ow -5	Stem Aug	er (H	SA)		DATE	TIME	DTW	(ft btor)	CASING	STAB	ILIZATION TIME
CACIN	IC CITE						071		CMP FF Dell Die							
LASIP	NG SIZE:	4-1/4	4° 1.1). & 8-	-1/4	" U.D.	UIF	IEK:	CME 55 Drill Rig				r –			
	UGER				1	MPLE	1		SAMPLE	DESCRIPTION			H&S	WELL II	NSTALLAT	TION DIAGRAM
DEPTH				REO		DEPTH		OWS					Methane			Stick-up = 3.20
ä	TIME	NC	-	(in.	-	(Ft.)		6")		CAND			(ppm)		10	1
_	14:45	N/	4	NA	1		Г	٩S	-	SAND			0			
		\square		_		1		L	Proum cand with c	ranic matoria	l and cod					
									Brown sand with o	nganic materia	i anu sou					
						2			2'							GROUT (TYP)
_ [_ [v	VASTE					23	$\left \right $
Τ			Π	Τ	Τ	3										
		\square							1							<
				+	\uparrow	4			Dark brown fine silty sand in		tplastic, ti	le, paper,				
		+		+	+	4		-	tabric (dry to moist)						
_		┢┼┤		+	+		-	-	1				\vdash			
5	15:15	\vdash		-	+	5	\vdash	-	d				*			
\dashv	15:18	$\left \right $		+	+		-		Gray sand with possibly some	e clay content (waste	cohesive)	with little	0			0.00
		\square		_	-	6	-	_					\vdash			2-INCH SCH 40 PVC
		\square							4							SOLID
						7										5
															*	T
						8			Black fine silty sand intermi	xed with a large	e amount o	of waste-				
									paper, wood, plastic, organic	s, metal, fabric	(moderate	ely moist)				2
						9										
				+		,										
10	15.20			-		10			-							
10	15:30					10							-			
	15:34	\vdash	_	-	+				-				0			d e
_		\vdash	_	-	+	11			-							
_		\vdash	_	-	-				-						38	
		\vdash	_	+	_	12			-						18	
									Black fine silty sand intermit plastic, paper, wood, organic						14	
						13			plastic, paper, wood, organic	s, metal, labi ic	liiouerate	iy moist)				
		\square							4				\square			
		\square				14			4							
15	15:51					15							•		33	
	15:56												0			1
		\square			Τ	16										
		\square				-			1							
		$\uparrow \uparrow$			╡	17			1							1 m
\neg		+			+	1/		-	Plack fing gilts and interest	ived with ala-t	a nonce -	ranico				
\dashv		+		+	+		-	-	Black fine silty sand intermi wood (mo	ixed with plasti derately moist		ı gaпics,	\vdash			
\dashv		$\left \right $		+	+	18	-	-	-				\vdash			
\dashv		$\left \right $		+	+		-	-	4				\vdash			1
\dashv		$\left \right $		_	+	19	-	-	4				\vdash			
		$\left \right $		_	+		-	-	4				\vdash			
20	16:03	↓	,	¥		20	,	•		d obstruction			+		85 B	
									20' Har	d obstruction						
	Notes:	btor MP =	= B = Me	elow easuri	top ing p	water of riser point PTIONS -	based	l on c	observed cuttings from auger v	vhen no split sp	oon collec	cted.				

S	C S 4041	Park	Oa	ks Bl	vd., S	Suite 100		PHASES I-VI LIQUID AS SOUTHEAST C	OUNTY LANDF		3	REPORT C	F BORING : S SHEET JOB N0.	B-16D 2 of 4 09215600.03
DRILI		Tar	-	TIEF		- Derek a	and Ben		HIA, FL HORIZ: ELEV.:	N124979 GROUND	= 180.4			See notes for datum op of PVC (Riser) 183.6
	ECTOR: PLER:				C. De	evitt n - Starte	ad at 50'		DATE START	2/14/2	2017		DATE END	2/15/2017
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	BER.					Hamme					GR	OUNDWAT	ER READING	S
METH	HOD:			Hollo	ow -St	tem Auge	er (HSA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1/-	4" I.I). & 8-	1/4" (0.D.	OTHER:	CME 55 Drill Rig						
А	UGER				SAM	IPLE		SAMPLET	DESCRIPTION		1	H&S	WELL I	NSTALLATION DIAGRAM
DEPTH				RE	-	DEPTH	BLOWS					Methane		
DEF	TIME	NC		(in.	-	(Ft.)	(/6")					(ppm)		
	16:07	N.	A	NA	1		NS	WAST	E (CONT.)			0		
				+		21		+						
				_				-						
		$\left \right $		+		22		-						GROUT (TYP
				+				Black fine silty sand intermi	ved with paper	organics	wood			
		\vdash		+	+	23			c (moist)	, 51 ganits,		\vdash		
		\vdash		+		a :	- -	+				\vdash		
		\vdash		+	+	24		+				\vdash		
25	16.20	\vdash		+	+	25		+				\vdash		
25	16:28 16:33			+		25		 		·		▼ 0		
	10.55			+		26		+						2-INCH
				+		20		+						SCH 40 PVC SOLID
						27		+						JOLID
						27		Black fine silty sand interm	ixed with plast	ic. naper. w	zood.			*
						28			al wire (moist)	ie, paper, i				
						29								
30	16:39					30]				•		
	16:44											0		
						31								
								-						
				_		32		-						
								Black fine silty sand intermi	ked with a meta aper (moist)	al wire, org	anics,			
				_		33		prastic, p	iper (moist)					
		$\left - \right $		+	-			4						
		\vdash		+		34	- -	+				\vdash		
25	16.40	\vdash		+	+	25		+				\vdash		
35	16:48 16:52	\square		+		35		 				▼ 0		
	10.32			+		36		+						
				+		50		1						
				\uparrow		37		1						
		\square						Black fine silty sand intermi	ked with a met	al wire, org	anics,			
						38			aper (moist)					
]						
						39		1						
		\square						ļ						
40	17:00		,	¥		40	↓					¥		
	Notes:	btor	- = B	elow	to w top o ing po	of riser	<u> </u>					<u> </u>	<u> </u>	

DEPTH	CTOR: ER: DD:	4-1/4" /	SCS - C. Split Sp Hydrau Hollow I.D. & 8-1	oon - Starte lic Hamme -Stem Auge	ed at 50' r er (HSA)	CME 55 Drill Rig	HORIZ: ELEV.: DATE START DATE DATE	N124979 GROUND : 2/14/2 TIME	= 180.4 017 GR(DUNDWAT (ft btor) H&S	WELL MP: T DATE END ER READING CASING WELL I	op of PVC 2/15/20 S STAE		3.6 I TIME
METHO CASINO AU	DD: G SIZE: IGER TIME	NO.	Hydrau Hollow I.D. & 8-1 SA REC (in.)	lic Hamme -Stem Auge L/4" O.D. AMPLE DEPTH (Ft.) 41	r er (HSA) OTHER: BLOWS (/6")	SAMPLE DI		TIME		(ft btor) H&S	ER READING CASING	S STAE	ILIZATION	
	G SIZE: IGER TIME	NO.	Hollow I.D. & 8-1 SA REC (in.)	-Stem Auge L/4" O.D. MPLE DEPTH (Ft.) 41	er (HSA) OTHER: BLOWS (/6")	SAMPLE DI		TIME		(ft btor) H&S	CASING	STAE		
DE PTH	IGER TIME	NO.	S/ REC (in.)	MPLE DEPTH (Ft.) 41	BLOWS (/6")	SAMPLE DI	ESCRIPTION				WELL I	NSTALLA	TION DIAG	RAM
DEPTH	TIME		REC (in.)	DEPTH (Ft.) 41	(/6")		ESCRIPTION				WELL I	NSTALLA	TION DIAG	RAM
			(in.)	(Ft.) 41	(/6")	WASTE				M - +1				
	17:03	NA	NA		NS	WASTE				Methane (ppm)				
							(CONT.)			0				
				42		ł								
													GROU	T (TYP)
													1	
			1 1	43		Black fine silty sand mixed wit (mo	h wood, pape oist)	r, plastic, oi	ganics				~	
				44		-								
						ļ								
45	17:05 8:35			45						•				
	0:35			46		İ								NCH 40 PVC
														LID
				47		Black fine silty sand mixed wit	h wood none	u mlastia o	aonioa	_		•		
				48			oist)	, plastic, ol	games					
				49		-								
50	8:43	¥	+	50	•					•			2	
	9:08				13	Start Split Spoor	n Sampling at	50'		0				
		S-1	5	51	17 12	Black fine silty sand intermixe (mo	ed with organ oist)	ics, wood, p	olastic					
	9:10			52	30									
	9:29				9	{	ood	on on (m ois						
		S-2	20	53	13 16	Black fine silty sand mixed Wo	ood	aper (mois						
	9:31			54	17	Black fine silty sand mixed w								
	9:39				45	Black fine silty sand mi	ixed with was	te (moist)					3	
55		S-3	15	55	9 9		ood			•	Ţ		1.100	
	9:42			56	10	Gray sand mixed with black fi	ne silty sand,	ittle waste	(wet)					
	9:55				13	Gray sa	nd (wet)				56.5		Benton	ite Chip
		S-4	20	57	10 10	Black fine silty sand mixed wi	ith wood, orga	nics, glass	(wet)					yp.)
\neg	9:56			58	10	Gray san Black fine silty sand m	nd (wet) nixed with wa	ste (wet)						
+	10:15			50	4	58.5'	ND	(
		S-5	21	59	17 30	Gray, fine to medium s		ad (web)			59.5			
60	10:18			60	38	Gray, the to medium s	sanu, compaci	.eu (wet)		¥			Fine	Sand
N	otes:	btor = E	Depth to Below top easuring	o of riser	1	<u> </u>					60.5			

9	CS	EN	GII	NEE	DS	PR	OJECT			REPORT O	F BORING : S	B-16D	
		EN	011	NEE	N S	PHASES I-VI LIQUID AS	SSESSMENT M	ONITORING	3		SHEET	4 of 4	
	4041	Park O	aks Blvd.	., Suite 100	0	SOUTHEAST C	OUNTY LANDF	ILL			JOB NO.	09215600	.03
		Tampo	a, FL 336	510		LIT	HIA, FL				CHKD. BY		
DRIL	LER:		TIERR	A - Derek	and Ben		HORIZ:	N124979	6.9 E5	98315.2		See notes	for datum
							ELEV.:	GROUND			WELL MP: T	op of PVC (I	Riser) 183.6
INSP	ECTOR:		SCS - C.	Devitt			DATE START	2/14/2	2017		DATE END	2/15/201	7
SAM	PLER:			oon - Start					0.0	0111111111		<i>.</i>	
			5	lic Hamme					GR	OUNDWAT	ER READING	5	
MET	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABII	LIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-1	1/4" O.D.	OTHER:	CME 55 Drill Rig							
	AUGER		SA	AMPLE		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATI	ION DIAGRAM
Ŧ			REC	DEPTH	BLOWS					Methane			
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)			
	10:30				9	SAND	(CONT)			0	60.5		Coarse Sand
		1		61	16	0.1112	(0011)					4	-
		S-6	24	01									2" SCH 40 PVC
					27						61.5	88 - E	NO. 10 SLOT
	10:32			62	26	Light gray/tan, fine to m	edium grain si:	ze sand (we	et)			<u> 1</u>	SCREEN
	10:50				2								L=2 FT
				63	2	63.2'							PVC End Cap
		S-7	24	03	2								L=4"
					3	L C	LAY				63.5	1	F
	10:52			64	4	Gray silt	y clay (wet)			↓			
						BO	E-64			_	-		

 BOE=64'

 - ADVANCED AUGERS TO 64' TO SET PIEZOMETER. HIGH LIQUID LEVEL CREATED SAND INTRUSION INTO AUGERS.

 - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~0.75' INTO CLAY.

 - DEVELOPED PIEZOMETER ON 2/17/17 USING MONSOON SUBMERSIBLE PUMP. REMOVED ~ 80 GALLONS.

Location ${\sim}10'$ south of original location, obstruction at ${\sim}15'$ below ground at original location, causing move.

Notes:

DTW = Depth to water btor = Below top of riser MP = Measuring point BOE = Bottom of exploration

S	4041	Park 0	Daks		NEE ., Suite 100 610		S	PHASES I-VI LIQUID A SOUTHEAST (<u>ROJECT</u> ASSESSMENT M COUNTY LAND FHIA, FL		G	REPORT O	F BORING : SI SHEET JOB NO. CHKD. BY	3- <u>17D</u> 1 of <u>4</u> 0921560 	0.03
RIL	LER:				A - Cruz, I	Derel	k, an	d Ben	HORIZ:	N1250512		111.1			s for datum
NSP	ECTOR:		S	CS - B.	Weglarz				ELEV.: DATE START	GROUND = 2/9/2			WELL MI DATE END		VC (Riser) 185.47
AMI	PLER:				oon - Start	ed at	55'		Diffeotiniti				51112 2112	2/10/20	.,
			Η	ydrau	lic Hamme	r							ER READINGS		
1ETI	HOD:		Н	ollow	-Stem Aug	er (H	SA)		DATE	TIME	DTW	(ft btor)	CASING	STAE	BILIZATION TIME
12A'	NG SIZE:	4-1/4"	ID	8.8.1/	4" O D	OTH	IFR.	CME 55 Drill Rig							
ASI	NU SIZE.	4-1/4	I.D.	a o-1/	4 U.D.	011	ILK.	CME 55 DTIII Kig							
	AUGER		-		AMPLE	1		SAMPLE	DESCRIPTION			H&S	WELL I	NSTALLA	TION DIAGRAM
DEPTH		NO.		REC (in.)	DEPTH (Ft.)		OWS					Methane			Stick-up = 3.0
ā	TIME		+		(FL)	-	'6")		SAND			(ppm)		803 80	8
	12:53	NA	_	NA		1	NS	4				0			
				_	1		<u> </u>	Brown sand with little de	ebris (waste), o etal/ash	rganic mate	erial,				
								1.5'	,						
					2			v	VASTE						GROUT (TYP
			Τ	Τ										25	
		\square	╈		3	1	1	1							
-		+	+	+	5	╞	1	Plack fine allow and inter-	vod with the	wood -1-	He MIC			88	K
_		\vdash	╉	+	<u> </u>	+	-	Black fine silty sand intermi tape strip, paper, r			ыс, VHS	\vdash		18 A	
_		\vdash	╉	+	4	\vdash		+				\vdash			
_		\vdash	+	+		-		ł				\vdash			
5	13:23	\vdash	+	+	5	-		 				+			
	13:26	\square						ļ				0			
					6			ļ						5	2-INCH SCH 40 PVC
														88 B	SCH 40 PVC SOLID
					7			Black fine silty sand intermize	xed with plastic moist)	c, wood, me	tal (dry			28 S	\int
	_								moisej					<	
			+	+	8			1							5
-			+	+	0			1							
-			+	+				+						23	
			_	-	9		<u> </u>	Black fine silty sand intermiz	xed with a large	e amount o	f waste-				
			_	_				fabric, wood, plas						88 - 88	
10	13:32			_	10							*			
	13:37											0			
					11			ļ							
					12										
								Black fine silty sand intermiz	xed with a large	e amount o	f waste-				4
					13			plastic, paper, wood, st							8
		\square	╈			1	1	1							
		\vdash	+	+	1.4	1	1	1							
-			+	+	14	╞	1	1							
15	10.10	\vdash	+	+	45	\vdash	-	t						1	
15	13:49	\vdash	+	+	15	\vdash	-	+				· ·			
_	13:52	\vdash	+	+		-		ł				0			
_		\vdash	+	+	16	-	-	ł				\vdash			
_		\vdash	+	_		<u> </u>	<u> </u>	ł				\vdash		12	
		\square	\perp	_	17	<u> </u>	<u> </u>	ļ				\vdash			1
		\square		_	<u> </u>			Black fine silty sand intermix	ed with plastic	, paper. wo	od (drv)				
					18				passe		. (,)			38	
		LT													
			Τ	T	19										
		$ \uparrow $	╈	1		1		1							
20	14:01	\square	+		20	1	t –	1						12	
20	14:01		+	*	20	+	*	<u>+</u>				1		12.0	
	Notes:	I			I	1		I				I			
	Notes:	btor = MP =	Bel Mea	ow to suring	o water p of riser g point	based	d on c	observed cuttings from auger v	vhen no split sr			1			

S		Park C	Daks		NEE ., Suite 100		S	PHASES I-VI LIQUID AS SOUTHEAST C	<u>OJECT</u> SSESSMENT MC OUNTY LANDF HIA, FL		Ê	REPORT (OF BORING : S SHEET JOB NO. CHKD. BY	SB-17D 2 of 4 09215600.03
ORILI	LER:				A - Cruz, I)ere	k, an		HORIZ:	N125051				See notes for datum
NSP	ECTOR:		SC	CS - R	Weglarz				ELEV.: DATE START	GROUND 2/9/2		ł		Top of PVC (Riser) 185.47 2/10/2017
	PLER:				oon - Start	ed at	55'		DATESTART	2/ // 2	017		DATEEND	2/10/2017
	BBR				lic Hamme						G	ROUNDWA	TER READIN	GS
METH	HOD:		Н	ollow	-Stem Aug	er (F	ISA)		DATE	TIME	DTV	V (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1/4"	I.D. 8	& 8-1/-	4" O.D.	OT	HER:	CME 55 Drill Rig				1		
А	UGER			SA	AMPLE			SAMPLE I	DESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM
ΗH				REC	DEPTH	BL	ows					Methane		
DEPTH	TIME	NO.		(in.)	(Ft.)	(,	/6")					(ppm)		
	14:05	NA		NA			NS	WAST	E (CONT.)			0		
				I	21		1						1	
													-	
_			-	-				-					-	
		++	+	-	22	-		-				\vdash	-	GROUT (TYP)
$ \rightarrow$				_			<u> </u>	4				\vdash	-	
					23			Black fine silty sand intermix	ed with wood, n dry)	netal wire,	, plasti			
								l (; ;					
T			Τ		24	Γ								
			╈	1		t		1					1	
25	14.00		+	+	0.5	1		1					1	
25	14:23		+	+	25	-		hard obstruction at 25.0'				0	-	
_	14:26		+	+		-		-					-	
			+	_	26	<u> </u>		-				\vdash	-	2-INCH SC 40 PVC
														SOLID
	_				27	1								
											1.]	K
					28			 Black fine silty sand interm met 	ixed with plasti al (dry)	c, wood, fa	abric,			68 63
				+	20									
_			-	-									-	
			_	_	29			-					-	
				_			<u> </u>	4					-	
30	14:39				30							↓		
_ [14:43											0		
			Τ		31									
			T			1		1					1	
			+	+	22	\vdash		1					-	
		++	+	+	32	\vdash	-	1				\vdash	-	and the second
_		++	+	+		-	-	Black dirst intermixed with a fabric, palstic	lot of hard plas bags, paper (dr		metal,	\vdash	-	
		+	+	_	33				o., rapor (di			\vdash	-	
				_			<u> </u>	4					-	
					34									
35	15:04		Τ		35	Γ						•		
	15:08		T			Ĺ		1				0	1	
	10.00		+	+	26	1		1					-	
-+		++	+	+	36	\vdash	-	1					-	
-+		++	+	+		\vdash		-				\vdash	-	
\dashv		+	+	_	37			-				\vdash	-	
				_			<u> </u>	Black fine silty sand interm		c, metal, rı	ubber		-	
					38			(dry)					
_ [
Τ			Τ		39	Γ								
			╈	1		l		1					1	
4.2		++	+	+		\vdash		4				\vdash	-	
40	15:24	*	+	*	40	\vdash	▼	d				*	-	
	Net													
	Notes:	btor =	Bel	ow top	o water p of riser g point									

S		Park Oc	aks Blvd a, FL 33		0	PHASES I-VI LIQUID AS SOUTHEAST C LIT	OJECT SSESSMENT MC OUNTY LANDF HIA, FL		ï	REPORT O	F BORING : SHEET JOB NO. CHKD. BY	3 of 4	
DRIL	LER:		TIERR	A - Cruz, I)erek, an	d Ben	HORIZ: ELEV.:	N1250512 GROUND =			WELL MD.		otes for datum PVC (Riser) 185.47
INSP	ECTOR:		SCS - B	. Weglarz			DATE START	2/9/2			DATE ENI		
SAMI	PLER:			oon - Start									
			-	ilic Hamme			D 4 MP	(DI) (D			FER READI		
MEII	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DIW	(ft btor)	CASING	3	TABILIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:	CME 55 Drill Rig							
	AUGER		s	AMPLE		SAMPLE	DESCRIPTION			H&S	WFL	LINSTA	LLATION DIAGRAM
	IUULIN		REC	DEPTH	BLOWS	1	Listin Hon			Methane	WILL		
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)			
	15:28	NA	NA		NS	WAST	E (CONT.)			0		100	
				41								22	
						-							
				42									GROUT (TYP)
				1		1						3	
				43		Black fine silty sand intern	nixed with woo	d, hard pla	stic,			15	
-				40			al (dry)						
						1							
_		+		44		-						1.1	
			\vdash		\vdash	-				+			
45	15:41	+	+	45		┫────						13	
_	15:43	+	$\left \right $			-				0			2-INCH SC
_			\vdash	46	$\left \right $	-							40 PVC
		$\left \right $	$\left \right $	-		-						2.4	SOLID
				47		-						22	
						Black fine silty sand intern	nixed with woo abric (dry)	d, hard pla	stic,			225	
				48		-	abric (ury)						52
						-						38	
				49		-						18	
						_							
50	15:50			50						¥		100	
	15:54					_				0		122	
				51		_						63	
						_						13	
				52		Black fine silty sand interm		d plastic, n	netal				2
						wir	e (dry)						12 A
				53								2.4	
												(2)	
				54									
						Black fine silty sand, pla	actic organiae (vorumeict))				10
55	16:02	↓		55	•				, 	¥			
	16:15				16	Start Split Spoo				0		15	
		C 1	4.4	56	150/5	Misc. waste, wood, plastic (ve	ry wet- perched	d water)				5	
		S-1	11		-	Obstruction at 55.9'							
	16:19	1		57	-	1						22	
	16:47	1		1	4	1					53	7.5	
		1		58	11		1 1.1 -	1			▼		
		S-2	18		8	Black fine silty sand intermixe shell (very moist)	ea with wood, p	nastic, pap	er,		-		Bentonite Chip
	16:48	1		59	12								(typ.)
	8:47	1		57	12	Black fine silty sand intermixe	ed with wood, p	olastic, was	te				
60	0.47	S-3	20	60		59.5' S	AND			•			
υυ			-	60	22	+				•			
	Notes:	1	1	1	1								
		btor = E	Depth to Below to easuring	p of riser									

S				N E E , Suite 100		PHASES I-VI LIQUID AS	OJECT SSESSMENT MC OUNTY LANDF		3	REPORT O	F BORING : S SHEET JOB NO.	B-17D 4 of 4 09215600.03
			, FL 336				HIA, FL				CHKD. BY	
DRIL			TIERR	A - Cruz, D	erek, an		HORIZ: ELEV.:	N1250512 GROUND	= 182.4			See notes for datum op of PVC (Riser) 185.47
	ECTOR:			Weglarz			DATE START	2/9/2	017		DATE END	2/10/2017
SAM	PLER:			oon - Starte lic Hamme					GE	OUNDWAT	FER READING	
MET	HOD:		-	-Stem Aug			DATE	TIME		(ft btor)	CASING	STABILIZATION TIME
				0	. ,					. ,		
CASI	NG SIZE:	4-1/4" l	I.D. & 8-1	l/4" 0.D.	OTHER:	CME 55 Drill Rig						
	AUGER		SA	AMPLE		SAMPLE I	DESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS					Methane		
DEP	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
		S-3	20		45	SAND	(CONT.)			0	60.5	Fine Sand
	8:50	5-5	20	61	70							4
	9:05				4	_					61.5	Coarse Sand
				62	15	Coarse gra	ay sand (wet)					
		S-4	20	02		-						2" SCH 40 PVC NO. 10 SLOT
					25	62.8'						SCREEN
	9:07			63	15	- c	LAY					L=2 FT
	9:28				WH	-					63.6	4" Cap
		S-5	24	64	2	White silty c	lay (phosphatic)				
					3	-						
65	9:28			65	4	65'				¥		
	Notes:	btor = B MP = Me BOE = B	easuring Bottom o	o of riser	on							

S		Park	αOα	ks Blv	NE rd., Suite 3610		۲S	PHASES I-VI LIQUID A SOUTHEAST	<u>ROJECT</u> Assessment M County Land! Thia, FL		١G	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	SB- <u>18D</u> 1 of <u>4</u> 09215600.03	
DRIL	LER:	Tu			RA - Cru	z, De	rek, an		HORIZ:	N125050	1.7 E598	219.3	CIIKD. DI	See notes for datum	1
									ELEV.:	GROUND	= 179.8			Top of PVC (Riser) 182.	
	ECTOR:				B. Weglar				DATE START	2/10	/2017		DATE END	2/13/2017	
SAMF	LER:				Spoon - St aulic Ham		l at 50'				GR	DUNDWATE	R READINGS	s	
METH	10D-				w -Stem A		(HSA)		DATE	TIME		(ft btor)	CASING	STABILIZATION T	IME
					in otenin	uger	(11011)				5111	(11 5101)	Griorita		
CASI	NG SIZE:	4-1/	'4" I.I	0. & 8-	1/4" O.D.	C	OTHER:	CME 55 Drill Rig	-						
		Т										H&S			
	UGER	-			SAMPLE			SAMPLE	DESCRIPTION				WELL I	INSTALLATION DIAGRA	
DEPTH		N		REC			BLOWS					Methane		Suck-up =	: 2.9
ā	TIME	-		(in.		'	(/6")					(ppm)		100	
	8:51	N	A	NA	_		NS	4	SAND			0			
					1			Brown sand with little de		rganic ma	terial,				
								1.5'	etal/ash						
				+				1	WASTE					CDOUT	
-+		+	\vdash	+	2	+		· · · ·				\vdash		GROUT ([1 Y P]
-+		+			_	-+	_	4				\vdash			
					3			1				\square			
								Black silty fine sand interm	ixed with plast	ic, wood, f	loor tile			8.	
		Γ			4				(dry)						
				+	· ·	+		1							
-		+	\vdash	-		+		1				\vdash		15	
5	9:03	-			5	+									
	9:08	-				\square		4				0			
					6			ļ						2-INC	
														SCH 40 SOLI	
					7										
		-		-	/	-		-						K	
		-		-		_	_	Black silty fine sand intermix	ed with plastic,	fabric, w	ood (dry)				
					8		_	-						14	
					9									16	
														18 IS	
10	9:17				10							+		8.3	
10					10										
	9:21	-		-		_	_	-				0			
		-		_	11	_	_	-						12 59	
								-							
					12			Black silty fine sand intermix	red with wood	fahric nla	stic (drv)				
								black sity file said filering	icu with wood,	labiie, pia	stie (ury)			送	
					13	T]							
						+		1							
		1	\vdash	+		+	+	1							
		+	\vdash	+	14	+	+	+				\vdash		10	
		+	\vdash		_	+	_	Black silty fine sand interm waste- carpet, pla			of misc.	\vdash			
15	9:30				15		_	waste- tai pet, pla	, ioaiii, idDl			+			
	9:35											0			
					16		_]							
]							
		1	\square	+	4.7	+		1							
		+	\vdash	+	17	+	+	1							
\dashv		-	\vdash	_		+	_	Black silty fine sand interm waste- fabric, plast			ot misc.	\vdash			
		-		_	18	-+	_		,, pronig			\vdash			
					19										
		Γ		T		T									
20	9:41	1.		1	20	+		1				↓			
20	7:41	+	, 	*	20	+	v	+				-		10.2	
	Notes:											I			
	notes:	bto MP	r = B = Me	elow asuri	to water top of rise ng point CRIPTION		used on c	observed cuttings from auger v	vhen no split sr	oon colle	cted.				

S		Park C	aks	s Blvd.	NEE ., Suite 100		PHASES I-VI LIQUID AS SOUTHEAST C	OUNTY LANDF		3	REPORT C	F BORING : S SHEET JOB NO.	B-18D 2 of 4 09215600.03
ORILI		Tamp	Т		A - Cruz, I			HIA, FL HORIZ: ELEV.:	N125050 GROUND	= 179.8		CHKD. BY WELL MP: T	See notes for datum op of PVC (Riser) 182.71
	ECTOR: PLER:				Weglarz/0			DATE START	2/10/2	2017		DATE END	2/13/2017
AMP	LEK:				lic Hamme					GI	ROUNDWAT	ER READING	s
4eth	HOD:		Η	ollow	-Stem Aug	er (HSA)		DATE	TIME	DT	V (ft btor)	CASING	STABILIZATION TIME
ASIN	IG SIZE:	4-1/4"	I.D.	& 8-1/	4" O.D.	OTHER:	CME 55 Drill Rig						
		,				-		COUNTION			H&S	MELLI	
	UGER		Т	REC	AMPLE DEPTH	BLOWS		DESCRIPTION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	NO.		(in.)	(Ft.)	(/6")					(ppm)		
	9:44	NA		NA		NS	WAST	E (CONT.)			0		
					21								
					22								GROUT (TYF
			Γ		23		Black silty fine sand intern		al wire, pla	istic,			
			Γ				wood, and	rubber (dry)					
			Γ		24]						
			Τ]						
25	9:48		Γ		25					_	•		100
	9:52]				0		
			Γ		26								2-INCH
			Τ]						SCH 40 PV0 SOLID
			Τ		27								
			Τ				Black silty fine sand intermi	xed with wood	, plastic, ru	ıbber			K
			Τ		28		sole, me	tal (moist)					
			Τ										
			Τ		29								19 C
			Τ										18 K
30	10:02		Τ		30						+		
	10:47										0		
					31								
					32								
							Black silty fine sand intermi						送
					33		plastic, wood, metal wire,	metal chunks	dry to mo	ist)			
							1						
					34		1						
\square		\square					1						
35	10:57	\square		-	35	\square	 				•		
\square	11:00	\square					1				0		
\square				_	36		4				$\mid \mid \mid$		
\square		\square	\downarrow	-			4				$\mid \mid \mid$		
\square		\square		-	37		4						
-		\square	+	_			Black silty fine sand interm				$\mid \mid \mid$		10
-		\square	+	_	38		brown silty fine sand ar	ia chunks of m	ətar (11101St	-J			
-			+	_			4				$\mid \mid \mid$		
-		\square	+	_	39		4						
-		\square	+	_			4						
40	11:06	┥		¥	40	↓					+		
]	Notes:	btor =	Bel	ow to	o water p of riser g point	<u> </u>	<u> </u>						

21 55	4041	Park O	aks Blvd a, FL 33)	PHASES I-VI LIQUID AS SOUTHEAST CO LIT	OUNTY LANDF HIA, FL	ILL			F BORING : S SHEET JOB NO. CHKD. BY	3 of 4 09215600.03
DRIL	LER:		TIERR	A - Cruz, E)erek, an	d Ben	HORIZ: ELEV.:	N1250501 GROUND :			WELL MP: T	See notes for datum op of PVC (Riser) 182.71
INSP	ECTOR:		SCS - B	. Weglarz/C	. Devitt		DATE START	2/10/2				2/13/2017
SAMI	PLER:			ooon - Start Ilic Hamme					CP	OUNDWAT	ER READING	c
METI	HOD:		-	v -Stem Aug			DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
										. ,		
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:	CME 55 Drill Rig						
	AUGER		S	AMPLE		SAMPLE D	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS					Methane		
B	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		80. Di
	11:09	NA	NA		NS	WAST	E (CONT.)			0		
				41		+						
		\square				+						
				42		-						GROUT (TYP)
				43		Black silty fine sand intermix waste	ed with plastic (moist)	, wood, and	l misc.			
						waste						
				44		ļ						
						ļ						
45	11:14			45						+		
	11:17]				0		
				46								2-INCH
						Ī						SCH 40 PVC SOLID
				47		1						
						Black silty fine sand intermix	ed with wood	plastic and	metal			*
				48			very moist)	plubele, alle	metar			
				40								
_				10		1						
		++-		49		+						
						+						
50	11:23	*	*	50	*	Start Split Spoo	on Sampling at	50'		*		
_	11:28	-			12	Black silty fine sand intermixe waste (very moist to wet)	ed with wood, p	lastic, mis	c.	0		
		S-1	16	51	21 26	3" layer of white shell and	d stone					1
_		-				+						
	11:29			52	15	Water at 52' (pocket)						
_	11:42	-			6							
_		S-2	19	53	15	Black silty fine sand intermixe		aper, plasti	С,	\vdash	53.0	
_		-			12	rocks, wood, misc. waste (mo	ist)			- -		Bentonite Chi
	11:43			54	12							(typ.)
	12:00	-			17	Dark sand (moist)				- -		6 6
55		S-3	13	55	60					+		
		-			21	Wood and coarse gray sand in	termixed with	rocks and	black	0		
	12:02	<u> </u>	<u> </u>	56	54	mud (wet) 56.3'				\vdash	•	
	12:16	4			10		AND				▼ -	
		S-4	18	57	20	ļ					57.0	
		4	-		35		-10/10	. 1.)				Fine Sand
	12:18			58	41	Coarse gray sa	nd (Moist to w	etJ			58.0	
	12:25	1			7	_						Coarse Sand
		S-5	21	59	11	Becoming more si	Ity (sand mixed	i with clay])			2" SCH 40 PV0
		5-5	21		7	59.5'						NO. 10 SLOT
60	12:25			60	8		LAY			+	60.0	SCREEN L=2 FT
	Notes:					•						
			Depth to Below to	o water op of riser								
			leasurin									

	1 Park Oo			1.5	PR					F BORING : S	
RILLER:					PHASES I-VI LIQUID AS SOUTHEAST CO			ì		SHEET JOB NO.	4 of 4 09215600.03
	lampo	a, FL 336		,		HIA, FL	ILL			CHKD. BY	09215600.05
JODECTOR	,		A - Cruz, D	erek, and		HORIZ:	N1250501		19.3		See notes for datum
		SCS - B	Weglarz/C	Devitt		ELEV.: DATE START	GROUND = 2/10/2				op of PVC (Riser) 182.71
AMPLER:			oon - Starte			DATESTART	2/10/2	.017		DATEEND	2/13/2017
			lic Hamme					GROU	JNDWAT	ER READING	<u>s</u>
IETHOD:		Hollow	-Stem Auge	er (HSA)		DATE	TIME	DTW (f	ft btor)	CASING	STABILIZATION TIME
ASING SIZE:	: 4-1/4"	I.D. & 8-1	1/4" O.D.	OTHER:	CME 55 Drill Rig						
AUGER		SA	AMPLE		SAMPLE D	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH JMIL		REC	DEPTH	BLOWS				Ν	Methane		
TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
12:31				2	CLAY	(CONT.)			0	60.5	PVC End 0
			61	2							L
	S-6	24		3	White silty cl	ay (phosphatic	c)				
2 12 21			(2)						1		
2 12:31 Notes:	·	I	62	4	62' POI	E = 62'			Ŧ		
Notes:		Depth to									
Notes:	btor = H		p of riser								

S	C S 4041	Park Oo		Suite 100		PHASES I-VI LIQUID ASS SOUTHEAST CO					F BORING : SI SHEET JOB NO. CHKD. BY	B-19D 1 of 5 09215600.03
DRILL	LER:		TIERR.	A - Cruz, I)erek, an		HORIZ:	N1250693				See notes for datum
INSPE	ECTOR:		SCS - B.	Weglarz/	M. Rivera		ELEV.: DATE START	GROUND = 2/1/20			DATE END	op of PVC (Riser) 203.06
SAMP	LER:		Split Sp	oon - Start	ed at 75'							
			Hydrau	lic Hamme	r	-			GR	OUNDWAT	ER READINGS	s
METH	IOD:		Hollow	-Stem Aug	er (HSA)	-	DATE	TIME	DTW	' (ft btor)	CASING	STABILIZATION TIME
ACIN	IG SIZE:	4 1 / 4 1	10.00	1/4" 0 D	OTHER	CMP 55 Deill Die						
ASIN	IG SIZE:	4-1/4	I.D. & 8-	1/4 U.D.	UTHER:	CME-55 Drill Rig						<u> </u>
	AUGER		SA	AMPLE	-	SAMPLE DI	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS					Methane		Stick-up = 2.6
DEI	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
	10:02	NA	NA		NC	SA	ND			0		
				1		Brown sand with little debr		ganic mater	ial,			122
				1			ıl/ash					
-			++-			1.5'	CIPE					
_			+	2		WA	STE					GROUT (TYP
						Metal, plastic, wires, g	lass, paper, w	ood (dry)				
T				3								
\neg				-		Metal, wire mixed with l	olack silty fine	sand (drv)				
+		\vdash	+		\vdash	-		. (/)				
\dashv		\vdash	+	4	\vdash	+						
		\square	\square	L	\square	Metal wire, black silty fine s	and, pieces of	radiator (d	lry)			
5	10:43			5			.,			÷		
	10:51									0		
+	-0.01					Black silty fi	ne sand (dry)			Ĭ		2-INCH
-+		$\left \cdot \right $	+	6	\vdash	+				\vdash		SCH 40 PVC
			\downarrow			-						SOLID
				7								
												*
				0		Glass, metal scraps, nails, me	tal wire, brow	n silty fine	sand,			13 13
-			+ + -	8		moist black silty fine sand, co			ıbber,			
_		$\left \right $	++-			strips of plast	ic (mostly dry)				
				9								
10	11:22			10						¥		
10				10						0		
-	11:26					Rubber, wood, strips of plasti mo	c, black silty fi vist)	ne sand (si	ightly	0		12
_			++-	11	-							
			\square			Wood, strips of plastic, black s		some brow	n silty			100
				12			ightly moist)					
												10 A
\uparrow				13		1						
\dashv		++	++-	13		1						
\dashv		+	+ + -		$\left - \right $	Fiberglass, black silty fine amounts of brown silty fine sa				\vdash		
$ \downarrow$		\square		14	\square	amounts of brown sity fille se	, iiiist. wdSl	< (Sugnity)				
15	11:43			15						¥		
	11:47					Plastic, metal, black silty	fine sand, (sli	ghtly moist)	0		
+	11.7/					+			· —			
+		++	++-	16	+	Rubber, glass, fiberglass, black	silty fine san	d (slightly 1	noist)	\vdash		
		\vdash	++-		-	L						100 B
				17		Metal wire, black and brown s		ntermixed,	metal			123
Ţ		[ghtly moist)					
1				18		Rubber, plastic strips, plas	stic chunks (sl		t)			
+				10		+	`					
-		++	++		\vdash	-						
\rightarrow			++-	19	\vdash	Moist clay, black and brown si		ntermixed,	wood			
						(slight)	y moist)					
20	12:27	+	+ -	20	•					+		
		1										
<u>ו</u>	Notes:	I	I	L	L	I				I	1	
		btor = MP = N	leasuring	p of riser g point	hased on a	bserved cuttings from auger w	han na anlit a		ad			

5					NEE		PHASES I-VI LIQUID AS				REPORT O	F BORING : S SHEET	2 of 5
	4041			s Blvd. FL 336	., Suite 100 610	0		OUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.03
RIL	LER:		T	IERR	A - Cruz, E)erek, aı		HORIZ: ELEV.:	N1250693 GROUND =				See notes for datum
NSPI	ECTOR:		S	CS - B.	Weglarz/	M. Rivera	L	DATE START	2/1/20				Top of PVC (Riser) 203.06 2/3/2017
AMF	'LER:				oon - Start lic Hamme					GR	οιινοωάτ	ER READING	25
1ETH	IOD:			-	-Stem Aug			DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
- 1 CIN	IG SIZE:	11/	4" 1 Г	0.0 ·	1/4" 0 D	OTHER	CME EE Drill Dig						
		4-1/	4 I.L			UTHER:	CME-55 Drill Rig				H&S		<u> </u>
	UGER			SA REC	AMPLE DEPTH	BLOWS		DESCRIPTION			Methane	WELL I	INSTALLATION DIAGRAM
DEPTH	TIME	NO		(in.)	(Ft.)	(/6")					(ppm)		
	12:33	NA	A	NA		NA	WAST	E (CONT.)			0		
				_	21		_						
_							-						
\dashv		$\left \cdot \right $			22		-						GROUT (TYP
\neg		$\left + \right $	+	+		$\left \cdot \right $	Metal chunks, wood, plasti						
\neg		$\left \right $	+	+	23	$\left \right $	mixed with black silty fine s sand. (Sli	and. Some laye ightly moist)	rs of light b	rown			
		\vdash	+	-	24		1						
		$ \uparrow$	\uparrow	1	1 4		1						
25	12:53				25						+		
	12:57						Wood, black and brown silt	y fine sand inte	rmixed (sli	ghtly	0		
		\square	\square		26		n	noist)					2-INCH SCH 40 PVC
			\square			\square	Plastic, wire, black and bro fabric, rug, plastic			xed,			SOLID
		$\left \right $	+		27								
		\vdash		-			Metal chunks, black and br (slight)	own silty fine s tly moist)	and interm	ixed			
_		\vdash		-	28								
		$\left \right $		+	29		Wood, black and brown silt	r fino cond into	rmivad (ali	abthr			
					2)			ioist)	rinixeu (siij	giitiy			(4) 約
30	13:24				30		-				+		
	13:30						Metal chunks, fabric, bla				0		
					31		intermixed (dry), carpet,	black silty fine	sand (mois	st)			
							PVC, wood, roots, rubber, fi	berglass, black	and brown	silty			
		\square		_	32		fine sand interm			,			
_		\vdash											
		\vdash	+	+	33		1						
			+		34		Tar paper, black and bro	wn silty fine sai tly moist)	nd intermix	ed			
							(siigii	ay moistJ					
35	13:53				35]				+		
	13:55	\square					4				0		
			\square	_	36	\square	Plastic bag, black	silty fine sand	(dry)				
		$\left + \right $	+	+		-							
		$\left + \right $	+	+	37	$\left \cdot \right $	Rug, plastic, rubber, black an m	id brown silty fi ioist)	ne sand (sl	ightly			
		⊢	+		38		+						
		╞┼┤	+		38		Black silty fine sand, plastic, intermixed, metal			e sand			
╡			\uparrow		39								
							Plastic scraps, black and br			ixed			
40	14:32	¥		¥	40	¥	(mos	stly dry)			+		
		1	ſ			1	1		-	-			

S					NEE		PHASES I-VI LIQUID AS				REPORT O	F BORING : S SHEET	3 of 5
	4041			, FL 3	d., Suite 10 3610	0	SOUTHEAST CO	JUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.03
ORILI	LER:			TIER	RA - Cruz, I	Derek, aı	nd Ben	HORIZ: ELEV.:	N1250693 GROUND =			WELL MD. T	See notes for datum op of PVC (Riser) 203.06
NSPE	ECTOR:			SCS - I	B. Weglarz/	M. Rivera	L	DATE START	2/1/20			DATE END	
AMP	LER:				spoon - Start ulic Hamme					CPO	שמחוור	ER READING	ç
1ETH	IOD:				w -Stem Aug			DATE	TIME		(ft btor)	CASING	STABILIZATION TIME
ACIN		4.1	/ 4 11 1	D 0 0	1/4"00	OTUED	CME SE Deill Die						
		4-1	/4 1	.D. & 8	-1/4 U.D.	UTHER:	CME-55 Drill Rig				110.0		
	UGER			REC	SAMPLE DEPTH	BLOWS	1	ESCRIPTION			H&S Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	N	0.	(in.)		(/6")					(ppm)		
	14:37	N	A	NA		NS	WASTI	E (CONT.)			0		
					41		Plastic, metal wire, wood (<u>mostly dry) Ha</u>	rd drilling	40'			
										,			
					42	\square	Fiberglass, copper, roots, bl intermixed	ack and brown (mostly dry)	i siity fine s	and			GROUT (TYP
\dashv					43		4						
\dashv		<u> </u>					Black and brown silty fine s	and intermixed	d, wood. pl:	astic			
\dashv		<u> </u>	\square	_	44	$\left \cdot \right $		tly dry)		-			
+		-	\vdash	+		++	+			·			
45	14:59	-	\square	+	45	+	╡─				0		
\dashv	15:03	$\left \right $	\vdash		4.0	+	Plastic, wood, black sil	ty fine sand (m	lostly drv)		1		2-INCH
					46		-	,					SCH 40 PVC SOLID
					47		+						SOLID
					17		Plastic bags, copper wire, bla	ack silty fine sa	nd (mostly	dry)			K
					48		1						
]						
					49		Glass, newspaper, black	silty fine sand	mostly dry	n)			
							Glass, newspaper, black	sity file said	inostiy ury	,			
50	15:19				50						+		
	15:24			_							0		
_				+	51		Black silty fine sand, p	lastic, wood, m	etal (dry)				
				-									
				-	52		-						
					53		Black silty fine sand, plasti	c bags, nails, m	etal wire (d	iry)			
							1						
					54								
							Rubber tires, plastic strips, r very light	oots, black silt t and fluffy)	y fine sand	(dry,			
55	15:33				55	\square					*		
	15:37						Wood, plastic, black sil	ty fine sand (n	ostly dry)		0		
$ \rightarrow$					56	$\mid \mid$							
\dashv		<u> </u>		+	+	$\left \cdot \right $	4						
\dashv		-	\vdash	+	57	++	Black silty fine sand, wood, pl	astic, metal chu	inks (most	ly dry)			
\dashv		\vdash	\vdash	+			+						
\dashv		$\left \right $	Η		58	++-	+				_		
			Η	\neg	59		1						
\dashv			Η	+	37		Black silty fine sand, big chun	ks of plastic, w	ood (mostl	y dry)			
	15:54	<u> </u>	↓┤	+	60	+	1				+		
60													

S	CS	EN	G	INEE	RS	<u>PROJECT</u> PHASES I-VI LIQUID ASSESSMENT MONITORING	REPORT (OF BORING : S SHEET	B-19D 4 of 5
		Park O	aks Bl	vd., Suite 10 33610		SOUTHEAST COUNTY LANDFILL LITHIA, FL		JOB NO. CHKD. BY	09215600.03
	LER:		TIEF	RRA - Cruz, I		d Ben HORIZ: N1250693.0 E5 ELEV.: GROUND = 200.4			See notes for datum op of PVC (Riser) 203.06
	ECTOR: PLER:			B. Weglarz/		DATE START 2/1/2017		DATE END	2/3/2017
	EER.			aulic Hamme		GF	OUNDWAT	TER READING	
1ETI	HOD:		Hollo	ow -Stem Aug	ger (HSA)	DATE TIME DTV	V (ft btor)	CASING	STABILIZATION TIME
ASI	NG SIZE:	4-1/4"	I.D. &	8-1/4" O.D.	OTHER:	CME-55 Drill Rig			
A	AUGER			SAMPLE		SAMPLE DESCRIPTION	H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			RE		BLOWS		Methane		
B	TIME	NO. NA	(in NA		(/6")		(ppm) 0		
_	15:57			61	NC	WASTE (CONT.)		-	
			+	61					
			\uparrow	62					GROUT (TY
				63		Black silty fine sand, wood, plastic bag, plastic chunks, metal			
						wire (mostly dry)		_	
				64					
				_				-	
65	16:11	$\left \right $	+	65	+		+	-	
_	16:49		$\left \right $	_			0	-	2-INCH
_		\vdash	+	66	+ $+$ $-$			-	SCH 40 PV
_			+	(7	+ $+$			-	SOLID
			+	67		Black silty fine sand, wood, plastic bag, plastic chunks (mostly			K
				68		dry)		-	
				69					
70	17:04			70			•	-	
_	9:00			_			0	-	
_				71				-	
_		\vdash	$\left \right $						
			+	72				-	
				73		Black silty fine sand, wood, plastic bag, plastic chunks (mostly dry)			
			\uparrow	13					
				74				1	
75	9:35	+	•	75	↓				
	9:44	-			2	Start Split Spoon Sampling at 75' Black silty fine sand intermixed with glass and wood (moist)	0	-	
		S-1	15	76	4	Wood	\vdash	-	
		-	1		8	Paper, wood, black silty fine sand (moist)	\vdash	-	
	9:45	-		77	21		+	-	
	10:11	1	1	. 78	6	Ash intermixed with glass and wood (moist)		-	
		S-2	16	δ /δ	5	Coarse white sand with black specks (moist)			
	10:13	1	1	79	4	Black silty fine sand intermixed with paper and wood (moist)		-	
	10:33	- S-3	1-		5	Ash intermixed with glass and wood (moist)]	
		3-3	15	80	7	Wood and plastic intermixed with some ash and black silty fine sand (moist)	•		
80		-				· · · · · · · · · · · · · · · · · · ·		1	

CASING SIZE: 4-1/4" LD. & 8-1/4" O.D. OTHER: CME-55 Drill Rig AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM # TIME NO. (in.) (FL) (/6") Methane (ppm) 8 S-3 15 2.0 WASTE (CONT.) 0 800 Bentonite CI 11:01 S-3 15 81 2.3 Plastic, wood, and paper intermixed (moist) 1 Bentonite CI (typ.) 82 S-4 13 82 6 SAND 1 1 84 S-5 16 84 20 Gray fine sand (Moist) 1 90 Fine Sand 85 11:47 85 63 12 96.2" 0 0 0 SCREEN 1.2 FT 86 S-6 15 86 27 96.2" 14:49 90 90 12.2 FT 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90							<u>.</u>						
4041 Park Oaks Bied, Sate 100 SOUTHEAST COUNTY LANDPILL JOB NO. 0221560.03 DRILLER: TIERRA - Cruz, Derek, and Ben HORIZ: N1250693.0 E597033.6 See notes for datum INSPECTOR: SCS - B. Weglarz/ M. Rivera DRILLER: N1250693.0 E597033.6 See notes for datum SAMPLER: Split Spon - Started at 75' Hydrault Hammer GRUUND#200.4 WELL MP. Top dPVC [Reer] 203.06 METHOD: Hollow -Stem Auger (HSA) DATE TIME DTW (R btar) CASING SIZE AUGER SAMPLE SAMPLE SAMPLE OESCRIPTION H&S WELL INSTALLATION DIAGRAM \$\frac{5}{2}\$ TIME NO. (in) (P1) 20 WASTE (CONT.) 0 Image: Plastic, wood, and paper intermixed (moist) Image: Plastic, wood, and paper intermixed (moist) Image: Plastic, wood, and paper intermixed (moist) Image: Plastic, Plastic, Withe silty clay (phosphatic) Image: Plastic, Pla	S	CS	EN	GI	NEE	RS			ONITORING		REPORT C		
DRILLER: TIERRA - Cruz, Derek, and Ben HORUZ: N12509/30.269/30.259/033.6 See notes for datum NSPECTOR: SCS - B. Weglarz/ M. Rivera DATE START 2/1/2017 DATE START 2/1/2017 SAMPLER: Split Spoon - Started at 75' Hydraulic Hammer GROUND 200.4 WELL MP: Top of PVC (Riser) 203.6 SAMPLER: Split Spoon - Started at 75' Hydraulic Hammer GROUNDWATER READINCS DATE START 2/1/2017 DATE START 2/1/2017 SAMPLE Sample - Started at 75' Hydraulic Hammer GROUNDWATER READINCS Stabilizzation TIM Aucer SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM Extra transmitter Ground 15 20 WASTE (CONT.) 0 0 81 10:34 Fine SA 13 5 16 Ba 20 SAND 82 S-4 13 27 Gray fine sand (Moist) 0 0 0 0 0 83 11:03 83 8 6 15 16 84 20 0	11.000		Park Oc	aks Blvd.	., Suite 100					х 			
INSPECTOR: SCS - B. Weglar/ M. Rivera ELEV: GROUND = 20.4 WELL MP: Top of PVC (Riser) 203.05 SAMPLER: Split Spoon - Started at 75' Hydraulic Hammer CROUND = 20.4 WELL MP: Top of PVC (Riser) 203.05 SAMPLER: Split Spoon - Started at 75' Hydraulic Hammer GROUNDWATER READINGS GROUNDWATER READINGS AUGER SAMPLE SAMPLE CASING SIZE: 4-1/4' LD. & 8-1/4' O.D. OTHER: CME-S5 Drill Rig DATE TIME DATE DATE Moint STABILIZATION TIM AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM ES TIME NO. (its.) (PT) HOWS Methane (pm) I 0 FINE CONT. 0 Image: Sample	DDII	I ED	Tampo			Samely on		1	N125060		-000 (CHKD. BY	
SAMPLER: Split Spon - Started at 75' Hydraulie Hammer GROUNDWATER READINGS METHOD: Hollow - Stem Auger (HSA) DATE TIME DATE GROUNDWATER READINGS CASING SIZE: 4-1/4* LD. & 8-1/4* OD. OTHER: CME-55 Drill Rig DATE TIME DATE STABILIZATION TIME AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM ES TIME NO. (In) (P1) (// OT (// OT (// OT AUGER SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM ES TIME NO. (In) (// OT) (// OT) (// OT) B1 10:34 (Cont) 15 81 23 Plastic, wood, and paper intermixed (moist) 0							a Ben	ELEV.:	GROUND =	= 200.4	/033.0		op of PVC (Riser) 203.06
GROUNDWATER READINGS GROUNDWATER READINGS DATE TIME OROUNDWATER READINGS CASING SIZE: 4-1/4* LD. & 8-1/4* D.D. OTHER: CME-55 Drill Rig AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S METHOD: H&S AUGER SAMPLE SAMPLE DESCRIPTION H&S METHOD: H&S METHOD: H&S SAMPLE SAMPLE DESCRIPTION H&S METHOD: H&S SAMPLE SAMPLE DESCRIPTION H&S SAMPLE DESCRIPTION H&S METHOD: Method: Method: SAMPLE SAMPLE DESCRIPTION H&S SAMPLE DESCRIPTION Method: Method: 1100 METHOD: Method: Grade of theS <					θ,			DATE START	2/1/2	017		DATE END	2/3/2017
METHOD: Hollow-Stem Auger (HSA) DATE TIME DTW (ft btor) CASING SIZE 4-1/4* LD. & 8-1/4* 0.D. OTHER: CME-S5 Drill Rig AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM ES TIME NO. (in) (Ft.) (/C*) Methane (ppm) I S-3 15 2.0 WASTE (CONT.) 0 Image: Control of the state intermixed (moist) Image: Control of the state intermixed (SAMI	'LER:								GRO	UNDWAT	'ER READING	S
AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM E TIME NO. (in.) (Pt.) (/6") Methane (ppm) 81 10:34 (cont) 15 81 23 Plastic, wood, and paper intermixed (moist) 0 0 81 10:34 5 81.3 7 83.4 13 82 6 10:34 (pp.) 0	MET	HOD:		-				DATE	TIME				STABILIZATION TIME
AUGER SAMPLE SAMPLE SAMPLE DESCRIPTION H&S WELL INSTALLATION DIAGRAM E TIME NO. (in.) (Pt.) (/6") Methane (ppm) 81 10:34 (cont) 15 81 23 Plastic, wood, and paper intermixed (moist) 0 0 81 10:34 5 81.3 7 83.4 13 82 6 10:34 (pp.) 0	CASI	NC CITE.	4 1 / 4"	יה 2.9.	1 /4" O D	OTUED.	OME EF Duill Dig			<u> </u>			
Bit International Sector 100 Overall Discrete 100 Overall Discrete 100 End No. Rin Rec. Image: Sector 100 Rec. Rec. Image: Rec.			4-1/-			UITER.				<u> </u>	1100		
a S-3 (cont) 15 20 WASTE (CONT.) 0 </td <td></td> <td>AUGER</td> <td></td> <td></td> <td>1</td> <td>DI QUIC</td> <td>SAMPLE D</td> <td>DESCRIPTION</td> <td></td> <td></td> <td></td> <td>WELL I</td> <td>NSTALLATION DIAGRAM</td>		AUGER			1	DI QUIC	SAMPLE D	DESCRIPTION				WELL I	NSTALLATION DIAGRAM
a S-3 (cont) 15 20 WASTE (CONT.) 0 </td <td>DEPTI</td> <td>TIME</td> <td>NO.</td> <td></td>	DEPTI	TIME	NO.										
B1 10:34 (cont) 15 81 23 Plastic, wood, and paper intermixed (moist) Image: Cont of the start of the st							WAST	E (CONT.)				80.0	
11:01 5 Moist black sand and wood 82 5 13 82 6 83 11:03 83 8 Gray fine sand (Moist) 83 11:44 11 84 5.5 16 84 20 84 5.5 16 84 20 6 94.5 85 613 35 85 63 7 94.5 94.5 86 5.6 15 86 27 94.5 94.5 94.5 94.5 87 13 12 96.2' 0 94.5 97.5	81	10:34		15	81			mixed (moist)		F		1	Bentonite Chips
82 S.4 13 82 6 SAND 83 11:03 83 8 Gray fine sand (Moist) Image: Sand (Moist) 84 S.5 16 84 20 Image: Sand (Moist) Image: Sand (Moist) 84 S.5 16 84 20 Image: Sand (Moist) Image: Sand (Moist) 84 S.5 16 84 20 Image: Sand (Moist) Image: Sand (Moist) 85 11:47 85 63 Image: Sand (Moist) Image: Sand (Moist) Image: Sand (Moist) 86 S.6 15 86 27 Image: Sand (Moist) Image: Sand (Moist) 86 S.6 15 86 27 Image: Sand (Moist) Image: Sand (Moist) 87 14:51 87 13 Image: Sand (Moist) Image: Sand (Moist) Image: Sand (Moist) 88 S.7 NR 88 3 Image: Sand (Moist) Image: Sand (Moist) Image: Sand (Moist) Image: Sand (Moist) 89 15:15 89 5 89 5 Sand (Moist) Image: Sand (Moist) I												1	(typ.)
3.4 1.3 7 83 11:03 83 8 11:144 11 83 8 11:144 11 84 20 84 S-5 16 84 20 11:44 11 85 63 11:47 85 63 11:49 12 86 27 86 27 86.2' 0 96 S-6 15 86 27 87 14:51 87 13 0 15:15 89 5 89 5 89 15:15 89 5 89 BOE = 89' Notes: ADVANCED AUGERS TO 87 TO CONFIRM CLAY AND SET PIEZOMETER. BOT HOO F PVC END CAP AND PRE-PACKED SCREEN SET ~1.1 'INTO CLAY. 	82	11	1		82	1		AND				1	
83 11:03 83 8 Gray fine sand (Moist) Image: Constraint of the sand (Moist) 84 S-5 16 84 20 84 S-5 16 84 20 85 11:47 85 63 95 11:47 85 63 14:49 11 86 27 86 S-6 15 86 27 87 14:51 87 13 15:15 2 White silty clay (phosphatic) 88 88 S-7 NR 88 3 9 15:15 89 5 89 5 89 15:15 89 5 89 5 89 15:15 89 5 89 5 89 15:15 89 5 89 5 80 00 00 00 00 00 BOE = 89' Notes: - ADVANCED AUGERS TO B7'TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.			S-4	13			ţ			F		1	
11:44 11 84 S-5 16 84 20 85 11:47 85 63 11:49 12 85 63 14:49 12 86 27 86 S-6 15 86 27 87 14:51 87 13 15:15 88 S-7 NR 88 3 89 15:15 89 5 89 5 BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.	83	11:03	1		83		Gray fine	sand (Moist)				83(
B4 S-5 16 84 20 B5 11:47 85 63 14:49 12 86 27 B6 S-6 15 86 27 B7 14:51 87 13 86.2' B8 S-7 NR 88 3 B9 15:15 89 5 89 5 B9 15:15 89 5 89 5 BOE = 89'	00		<u> </u>				ţ			F			Fine Sand
353 10 35 Coarse Sar 85 11:47 85 63 14:49 12 0 0 86 S-6 15 86 27 87 14:51 87 13 0 ScReEN 87 14:51 87 13 0 0 0 15:15 88 3 2 White silty clay (phosphatic) 0 0 88 S-7 NR 88 3 0 0 0 0 BOE = 89'	84		1		84		ţ			-			
85 11:47 85 63 14:49 12 0 0 86 S-6 15 86 27 87 14:51 87 13 12 87 14:51 87 13 12 88 S-7 NR 88 3 89 15:15 89 5 89 5 BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.			- S-5	16			ţ			_		84.5	Coarse Sand
14:49 12 86 5.6 15 86 27 86 27 86 27 86 27 86 27 86 27 86 27 15 86 87 13 15:15 2 88 S.7 89 5 89 5 BOE = 89' BOE = 89'	85	11:47	1		85		İ			-	+	•	
86 S-6 15 86 27 87 14:51 18 CLAY 87 14:51 87 13 15:15 87 13 PVC End 88 S-7 NR 88 3 9 15:15 89 5 BOE = 89' BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.											0	1	NO. 10 SLOT
S-6 15 18 86.2' 87 14:51 87 13 15:15 2 White silty clay (phosphatic) 86.8 88 S-7 NR 88 3 9 15:15 89 5 89 5 BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.	86				86	27	İ			_		1	
87 14:51 87 13 15:15 2 White silty clay (phosphatic) 808 88 S-7 NR 88 3 5 89 15:15 89 5 BOE = 89' Notes: ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.			5-6	15		18						1	
15:15 2 White silty clay (phosphatic) 87.3 88 S-7 NR 88 3 5 5 89 5 89 15:15 89 5 BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.	87	14:51	1		87	13		LAY				86.8	PVC Ellu Car
88 S-7 NR 88 3 9 15:15 89 5 BOE = 89' Notes: ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.		15:15				2	White silty cl	lay (phosphati	c)			87.3	3 L=6
89 15:15 89 5 BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.	88		6.7	ND	88	3							
BOE = 89' Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.			3-7	INK		5	I						
Notes: - ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.	89	15:15			89	5					L L		
- ADVANCED AUGERS TO 87' TO CONFIRM CLAY AND SET PIEZOMETER. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.1' INTO CLAY.							BOI	E = 89'					
		- ADVANC - BOTTOM	1 OF PVC	END CA	P AND PRI	E-PACKED	SCREEN SET ~1.1' INTO CLAY) ~ 10 GAL	LONS.			

DTW = Depth to water btor = Below top of riser MP = Measuring point

Notes:

S		Park C	Daks	Blvd	NEE ., Suite 100		5	PHASES I-VI LIQUID A SOUTHEAST	COUNTY LANDI		IG	REPORT OF	BORING : SB- SHEET JOB NO.	-19S 1 of <u>4</u> 09215600.03
DRIL	I FR.	Tamp			610 A - Cruz, E)erol	1 3 2		THIA, FL HORIZ:	N125047	977 55	97036.76	CHKD. BY	 See notes for datum
						Jerei	, dil	u beli		GROUND	= 200.0		WELL MP: T	Top of PVC (Riser) 203.36
	ECTOR:				Devitt				DATE START	2/24/	2017		DATE END	2/27/2017
SAMI	PLER:				oon - Start lic Hamme		71'				G	ROUNDWATE	RREADINGS	
MET	HOD:				-Stem Aug		SAI		DATE	TIME		W (ft btor)	CASING	STABILIZATION TIME
					8	(,					(
CASI	NG SIZE:	4-1/4"	I.D. &	8-1/	4" O.D.	OTH	ER:	CME 55 Drill Rig						
	AUGER			SA	AMPLE			SAMPLE	DESCRIPTION			H&S	WELL I	INSTALLATION DIAGRAM
			F	REC	DEPTH	BL	ows	1				Methane	1	Stick-up = 3.36
DEPTH	TIME	NO.	(in.)	(Ft.)	(/	6")					(ppm)		
	9:06	NA	1	NA		1	IS		SAND			0		
				1	1									
								Brown sand with som	ne organic mate	rial and so	d			
					2			2'						GROUT (TYP)
		+			2			-	VASTE				-	
		+		+				-					-	
-		+		-	3			-					-	
		++	_	-		-		Brown silty fine sand ir	ntermixed with	h waste-	metal		-	
		\vdash	_	-	4	_			rganics (dry)				-	
		\square	_		<u> </u>			4						
5	9:30				5			.				+		
	9:35]				0		
					6			-						2-INCH
													-	SCH 40 PVC SOLID
				1	7								-	Sound Sound
				-	/								-	K
		++	+	-				Black silty fine sand interm plastic, paper.	ixed with waste (moderately m		rganics,		-	
-		++		-	8			-		-			-	
		$\left \right $	_	-				-					_	SN 53
					9			-					_	
								_						
10	9:42				10							+		
	9:48											0		
					11									
								-						
					12									
				1	12			Plaak eilter fing oon d intormig	ad with waata	fabria wa	d nono		-	
		++		-	40			Black silty fine sand intermix (moist)	labric, woo	ou, pape	1.	-	
		++	+	+	13	-		1					-	
		++	+	+		-		4					-	
		++	+	-	14	\vdash	<u> </u>	-					-	10
		+	+	-		-		4					-	
15	9:55	+	+	-	15							+	-	
	9:59	\vdash	_	-		_		4				0	4	
		\square	_		16			4					4	
					17									
								Black silty fine sand intern	nixed with wast	e- rubber	gloves,			
			Τ		18				er, fabric. (mois]	
		$\uparrow \uparrow$	1					1					1	
		$\uparrow \uparrow$	1	1	10			1					1	
		++	+	+	19	-		-					1	
		++	+	+	<u> </u>	\vdash		-					-	
20	10:06	*	+	¥	20	-	7	+				•	-	
	Notes													
	Notes:	btor = MP = l	Belo Meas	ow toj uring	o water p of riser g point IPTIONS - 1	based	l on c	observed cuttings from auger v	vhen no split sp	oon collec	ted.			

		Park C	aks	Blvd.,	NEE , Suite 100		PROJECT PHASES I-VI LIQUID ASSESSMENT MONITORING SOUTHEAST COUNTY LANDFILL	R	EPORT (F BORING : S SHEET JOB NO.	B-19S 2 of 4 09215600.03
ORILL		Tamp	ΤI	ERRA	A - Cruz, E)erek, an	ELEV.: GROUND = 20	200.0	036.76		See notes for datum op of PVC (Riser) 203.36
NSPE SAMP	CTOR:				Devitt oon - Start	ed at 71'	DATE START 2/24/201	17		DATE END	2/27/2017
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					ic Hamme			GROU	NDWAT	ER READING	S
METH	OD:		HS	A			DATE TIME I	DTW (f	t btor)	CASING	STABILIZATION TIME
CASIN	G SIZE:	4-1/4"	I.D. &	8-1/4	+" O.D.	OTHER:	CME 55 Drill Rig				
۵	UGER			S۵	MPLE		SAMPLE DESCRIPTION		H&S	WELLI	NSTALLATION DIAGRAM
DEPTH	oulit		F	REC	DEPTH	BLOWS		Ν	lethane		
DEP	TIME	N0.	(in.)	(Ft.)	(/6")			(ppm)		
	10:09	NA	1	NA		NS	WASTE (CONT.)	_	0	-	
					21			_	_	-	
_								_	_	-	
_			-		22	-		_	_		GROUT (TYP
-+							Moist black silty fine sand intermixed with waste- fabric	ic	_	-	
+		\vdash	+	$\left \right $	23	$\left \right $	organics, metal wire, plastic. (moist)	,	_	-	
\neg		\vdash	+	$\left \right $		$\left \right $		\vdash	_		
+		\vdash	+	\vdash	24	$\left \right $					
25	10.12	\vdash	+	$\left \right $	25		1		\pm		
23	10:13 10:16	\vdash			25				0	-	
\uparrow	10.10	\vdash	1		26		+				2-INCH
					20					-	SCH 40 PVC SOLID
					27					-	
							Black silty fine sand intermixed with waste- fabric, plasti	tic,		-	K
					28		organics, wood. (moist)				
					29						
30	10:24				30				¥		
$ \rightarrow$	10:28								0	-	
\rightarrow					31					-	
									_	-	
					32	$\left \right $	-		_		
_						\vdash	Black silty fine sand intermixed with waste- plastic, rubb fabric, wood, organics. (moist)	ber,		-	
_					33			_	_		
\rightarrow					24	$\left \right $		-		-	
\neg		\vdash	1		34		ł	┢			
35	10:37	\vdash	1		35		+		+		
	10:40	\vdash					•	+	0		
					36		1				
					37						
\square		\square		\square			Black silty fine sand intermixed with waste- fabric, woo	od,			
		\square		Ц	38		metal. (moist)				
\downarrow		\square		\square							
\dashv		\square	-		39						
-+		\vdash	-	$\left \right $							
	10:59	¥	,	ł	40	+			¥		

R: POR: R: D:	Tampo	, FL 334 TIERR SCS - C. Split Sp Hydrau HSA .D. & 8-:	A - Cruz, E Devitt oon - Starte lic Hamme	erek, and ed at 71' r	d Ben CME 55 Drill Rig SAMPLE D	IIA, FL HORIZ: ELEV.: DATE START DATE ESCRIPTION (CONT.)	N1250679 GROUND = 2/24/2 TIME	<u>GR</u> (97036.76	DATE END ER READING CASING	09215600.03 See notes for datum Top of PVC (Riser) 203.36 0 2/27/2017 SS STABILIZATION TIM INSTALLATION DIAGRAM GROUT (TY)
'OR: R:): SIZE: 4 ER 11:02 11:02 11:02 11:02 11:02 11:02 11:02	NO.	SCS - C. Split Sp Hydrau HSA .D. & 8-	Devitt oon - Start lic Hamme 1/4" O.D. MPLE DEPTH (Ft.) 41 42 42 43 44	ed at 71' r OTHER: BLOWS (/6")	CME 55 Drill Rig SAMPLE D WASTE Black silty fine sand intermi	ELEV.: DATE START DATE ESCRIPTION (CONT.)	GROUND = 2/24/2 TIME	<u>GR</u> (OUNDWAT ' (ft btor) H&S Methane (ppm)	DATE END ER READING CASING	Fop of PVC (Riser) 203.36 2/27/2017 3S STABILIZATION TIM INSTALLATION DIAGRAM
R: SIZE: 4 ER IIME 1:02 	NO.	Split Sp Hydrau HSA .D. & 8-: St REC (in.)	oon - Starte lic Hamme 1/4" O.D. AMPLE DEPTH (Ft.) 41 42 43 43	OTHER: BLOWS (/6")	CME 55 Drill Rig SAMPLE D WASTE Black silty fine sand intermi	DATE START DATE ESCRIPTION (CONT.)	2/24/2 TIME	GRI DTW	OUNDWAT ' (ft btor) H&S Methane (ppm)	DATE END ER READING CASING	2/27/2017 S STABILIZATION TIM INSTALLATION DIAGRAM
C: 4	NO.	Hydrau HSA .D. & 8- S REC (in.)	lic Hamme 1/4" 0.D. AMPLE DEPTH (Ft.) 41 42 43 43 44	OTHER: BLOWS (/6")	SAMPLE D WASTE Black silty fine sand intermi	ESCRIPTION (CONT.)	e- metal, fal	DTW	r (ft btor) H&S Methane (ppm)	CASING	STABILIZATION TIM
SIZE: 2	NO.	HSA .D. & 8-: S/ REC (in.)	1/4" O.D. AMPLE DEPTH (Ft.) 41 42 43 44 44	OTHER: BLOWS (/6")	SAMPLE D WASTE Black silty fine sand intermi	ESCRIPTION (CONT.)	e- metal, fal		H&S Methane (ppm)		
ER TIME 1:02	NO.	SA REC (in.)	AMPLE DEPTH (Ft.) 41 42 43 43 44	BLOWS (/6")	SAMPLE D WASTE Black silty fine sand intermi	(CONT.) xed with wastr		bric,	Methane (ppm)	WELL I	
ER TIME 1:02	NO.	SA REC (in.)	AMPLE DEPTH (Ft.) 41 42 43 43 44	BLOWS (/6")	SAMPLE D WASTE Black silty fine sand intermi	(CONT.) xed with wastr		bric,	Methane (ppm)	WELL I	
FIME 1:02		REC (in.)	DEPTH (Ft.) 41 42 43 43 44	(/6")	WASTE Black silty fine sand intermi	(CONT.) xed with wastr		bric,	Methane (ppm)	WELL I	
1:02			(Ft.) 41 42 43 43 44		Black silty fine sand intermi	xed with waste		bric,	(ppm)		GROUT (TY
1:21	NA		42 43 44	NS	Black silty fine sand intermi	xed with waste		bric,	0		GROUT (TY
1			42 43 44					bric,			GROUT (TY
1			43					bric,			GROUT (TY
1			43					bric,			GROUT (TY
1			44					bric,			
1			44					0110,			
1					+		IJ	·			
1					ł						
1			45								
1					†				•		1.
			r						0		
			46								2-INCH
											SCH 40 PV SOLID
			47								
					Black silty fine sand intermi			bric,			E C
	_	_	48		plastic, wood, o	organics. (mois	τj				10
\rightarrow	_	_									
\rightarrow	_	_	49								1915 C.S.
	_										
			50								
1:54			51								
			01				wood, org	anics,			
			52		rubber) pie	Suci (moise)					
											成
			53		Hard drilling 53'-55'						
-+		_			ļ						
-+	_	_	54		1						
-+	_	_			ł						
1:49	+	+	55						•		
5:48	+	+	56		ł				0		
\dashv		+	50		ţ						
-+			57		1						
					Black silty fine sand intermix	ed with waste-	wood, org	anics,			
			58		metal.	(moist)					
[ļ						
\square			59		ļ						
$ \rightarrow $	_	_		-	ł						
6:11	+	¥	60	+					¥		
1 1 6	:48	:34	:34	:31 50 :34 51 :34 51 :34 51 :34 51 :34 51 :34 52 :34 52 :34 52 :35 53 :49 55 :48 56 :48 557 :48 557 :48 557 :49 55 :48 56 :49 55 :48 56 :49 55 :48 56 :49 55 :49 55 :48 56 :48 56 :59 59 :11 \checkmark :11 \checkmark	:31 50 :34 50 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 51 :34 52 :35 1 :36 53 :49 55 :49 55 :48 56 :49 56 :49 56 :49 56 :49 56 :48 1 :49 56 :40 58 :41 58 :11 • :11 • :11 • :11 • :11 • :11 • :11 • :11 • :11 • :11	31 50 :34 51 1 51 1 51 1 52 1 53 1 53 1 53 1 53 1 53 1 53 1 54 1 54 1 55 1 56 1 57 1 57 1 57 1 57 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 59 1 <	31 50 50 34 50 50 34 51 51 1 51 51 1 52 52 1 53 52 1 53 53 1 53 53 1 54 54 1 55 54 1 56 56 1 57 56 1 58 58 1 59 59 1 59 59 1 59 59 1 59 50 1 59 50 1 59 50 1 59 59 1 59 50 1 59 50 1 59 50 1 59 50 1 59 50 1 59 50 1 59 50 1 50 50	31 50 50 34 50 50 34 51 51 1 51 51 1 52 51 1 53 51 1 53 51 1 53 53 1 54 53 1 54 54 1 55 54 148 55 56 159 55 56 158 58 58 159 59 59 11 4 40 40 159 159 159 111 4 60 4 150 159 150 151 159 150 151 159 150 152 159 150 153 159 150 154 155 150 155 150 150 158 150 150 159 150 150	31 50 50 34 50 50 34 51 51 1 51 51 1 52 51 1 52 52 1 53 53 1 53 53 1 54 54 1 54 55 1 56 55 1 57 56 1 58 58 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59 1 59 59	31 50 0 34 50 0 34 50 0 34 51 0 1 51 0 1 52 0 1 52 0 1 53 0 1 53 0 1 53 0 1 54 0 1 55 0 14 55 0 14 56 0 15 57 0 14 58 0 15 59 0 14 59 0 15 0 0 14 0 0 15 0 0 15 0 0 15 0 0 16 57 0 17 58 0 18 0 0 11 0 0 12 0 0 14 <	31 0 0 0 33 0 0 0 34 0 0 0 34 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 149 0 0 0 148 0 0 0 148 0 0 0 148 0 0 0 148 0 0 0 149 0 0 0 149 0 0 0 149 0 0 0

S		Park	Oal		NEE ., Suite 100		PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT O	F BORING : S SHEET JOB NO. CHKD. BY	3B-19S 4 of 4 09215600.03
DRILI	LER:				A - Cruz, D)erek, an		HORIZ:			97036.76		See notes for datum
INSPE	ECTOR:		5	SCS - C.	Devitt			ELEV.: DATE START	GROUND 2/24/2				op of PVC (Riser) 203.36 2/27/2017
SAMP	LER:				oon - Starte								
METH	IOD:			Hydrau HSA	ilic Hamme	r		DATE	TIME		/ (ft btor)	ER READING CASING	STABILIZATION TIME
CASIN	IG SIZE:	4-1/4	4" I.I	D. & 8-	1/4" O.D.	OTHER:	CME 55 Drill Rig						
А	UGER			S	AMPLE		SAMPLE D	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH				REC	DEPTH	BLOWS					Methane		
DE	TIME	NO	-	(in.)	(Ft.)	(/6")					(ppm)		80 28
_	16:17	NA		NA		NS	WAST	E (CONT.)			0		
_				_	61								
_			_	_									12 5
_				_	62								GROUT (TYP
_			_	_									
_			_	_	63		Black silty fine sand intermix wood, paper	ed with waste ; metal (moist)		ganics,			
-		\vdash	+	_									
\dashv		\vdash	+	_	64								
\dashv		\vdash	+	_									SCH 40 PVC
65	16:27	\vdash	\downarrow		65						•		2-INCH SOLID
\dashv	16:32	\vdash	+	_	<u> </u>						0		30610
_			_	_	66								
_			_										
_			_		67		Black silty fine sand interm			vood,		67.0	D
_			_				organics, rabri	c, plastic. (moi	stj				Bentonite Ch
					68								(typ.)
					69							69.0	
70	16:42				70		Black silty fine sand interm	ixed with wast c, plastic. (moi		vood,		70.0	
	16:48						organics, rabri	c, plastic. (mol	stj				
_	16:52	*	_	¥	71	+	Start Split Spoo	n Sampling at	71		*		Coarse San
	17:00					45	Start Split Spot	ni Samping ac	/ 1		0		
		S-1		21	72	126	Black silty fine sand with	motal glace v	rood (moir	·+)			薑
_	¥					60	black sitty life salid with	i illetai, giass, v	/oou (mois	st)			薯
_	17:10		_		73	68							2" SCH 40 PV
_	17:25					14							NO. 10 SLOT SCREEN
_		S-2	2	14	74	12	Black silty fine sand with v	wood, glass, org	ganics. (mo	oist)			L=5 FT
_	+					23							
75	17:27		+		75	19						75.0	臺
-	8:29					11	Black silty fine sand and	sand with lime	stone chun	ks	\vdash	75.5	PVC End Car
-		S-3	3	18	76	12	Wood a	and plastic					L=6"
-	+				<u> </u>	14	Black silty fine sand wi	th sand and w	iste (glass)		\vdash	76.5	Bentonite Ch
-	8:30		+		77	10	Black silty fine sand w				-		Bentonite Ch (typ.)
+	8:50					7	77.5	AND				78.0	
-		S-4	ł	21	78	8	3.						
-	+					20							
	8:52				79	32					•		
	AUGERS WE BOTTOM OF	ERE AD	VANO ND C	CED TO 7 AP AND	'8' BEFORE IT PRE-PACKAGE	WAS DECIDI ED SCREEN S	BUI IN SAMPLES FROM 71'-79'. ID TO SET THE WELL AT 76', SO 76.5'-7 ET IN WASTE LAYER	E = 79' 78' was filled w	TH BENTONI	TE CHIPS	PRIOR TO PLA	ACING THE WEL	L
	NO LIQUID I Notes:	PRESEN	VT- P	IEZOME	FER NOT DEVE	ELOPED							
		btor MP =	= Be Me	elow to asuring	o water p of riser g point of exploratio	on							

S		Park	Oa		d., Su	EE ite 100		3	PHASES I-VI LIQUID A SOUTHEAST (<u>ROJECT</u> ASSESSMENT M COUNTY LANDI THIA, FL		G		F BORING : S SHEET JOB NO. CHKD. BY	1 of <u>4</u> 09215600.03
ORILI	LER:			TIER	RA - (Cruz, D	erek	, an	d Ben	HORIZ:	N125083 GROUND :			WELL MD. T	See notes for datum
NSPE	ECTOR:			SCS -	L. Ure	na/M. I	River	а		ELEV.: DATE START	1/23/				Cop of PVC (Riser) 192.86 1/27/2017
SAMP	LER:					- Starte		65'							
APTI	100			-		lamme		242		DATE	TIME			R READINGS	1
METH	10D:			Hollo	w -Ste	em Auge	er (H	SAJ		DATE	TIME	DTW	(ft btor)	CASING	STABILIZATION TIM
CASIN	NG SIZE:	4-1/	'4" I.I). & 8-	1/4" 0.	.D.	ОТН	ER:	CME 55 Drill Rig						
	UGER				SAMP	U E			SAMDLE	DESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM
	UGEN			REC	1	EPTH	BLC	WS	SAMF LE	DESCRIPTION			Methane	WELL I	Stick-up = 2
DEPTH	TIME	N	D.	(in.)		(Ft.)	(/)						(ppm)		
	12:53	N	A	NA			Ν	S	:	SAND			0		
				I		1				1					
									Brown sand with little de me	bris (waste), oi etal/ash	rganic mat	erial,			
						2									GROUT (T
-					+	2			2' V	VASTE					GROOT(I
-		┢			+				ł						
+		\vdash		+	+-	3			ł						
+		\vdash		_	+				Black silty fine sand intermi			tic, VHS			
\dashv		\vdash		+	+	4			tape strip, paper, r	netal, plastic ba	ags (dry)				
-		\vdash		+	+				ł						
5	13:23	\vdash			+-	5			+				*		
	13:26	\vdash			+				ł				0		
					+	6			ł						2-INCH SCH 40 P
					_				Black silty fine sand intermix	ved with plastic	wood me	atal (drv			SOLID
						7				moist)	., wood, me	tai (ui y			
															e
						8									
						9									
									Black silty fine sand intermiz fabric, wood, plas			f waste-			
10	13:32					10							¥		
	13:37												0		
						11									
						12									SX
									Black silty fine sand intermiz	ked with a large	e amount o	f waste-			100
						13			plastic, paper, wood, st						
						14			Ì						
				\top					Ì						10
15	13:49					15							+		
	13:52								[0		
						16									
									Ì						
						17			t						
					1				t						
\uparrow				+	+	18			Black silty fine sand intermix	ed with plastic	, paper, wo	od (dry)			
\neg					+	10			†						51
					+	19			t						
+				+	+	17			t						
20	14.01	\vdash		+	+	20		_	ł				-		
20	14:01		r	*	+	20		,	+				*		
<u> </u>	Notes:	<u> </u>			_				Į						
		bto	r = B	elow	to wa top of ng poi	riser									

S	C S 4041					Suite 100		5	<u>PR</u> PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT C	F BORING : S SHEET JOB NO.	B-20D 2 of 4 09215600.03
DU			npa	, FL 3	361	0			LIT	HIA, FL		50.55	05004.5	CHKD. BY	
	LER:					- Cruz, E			d Ben	HORIZ: ELEV.:	N125083 GROUND	= 190.0		WELL MP: T	See notes for datum op of PVC (Riser) 192.86
	ECTOR:					rena/M.				DATE START	1/23/2	017		DATE END	1/27/2017
AM	LER:					on - Start Hamme		65				GR	OUNDWAT	ER READING	S
ИЕТН	HOD:			HSA						DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
CASII	NG SIZE:	4-1/	4" I.I). & 8-	-1/4"	0.D.	OTH	IER:	CME 55 Drill Rig						
		, 					-			FOOD IDTION			H&S		
	UGER	-		REC	1	IPLE DEPTH	BL	ows	SAMPLE L	DESCRIPTION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	NC).	(in.		(Ft.)		6")					(ppm)		
	14:05	N.	A	NA			1	٩S	WAST	E (CONT.)			0		
						21									
		Ш				22									GROUT (TYP)
		Ц													
		Ц				23			Black silty fine sand interr plast	nixed with woo ic (dry)	od, metal w	vire,			
		Ц								. (, , ,					
		Ц			\perp	24									
		Ц			\perp										
25	14:23	Ц				25							↓		
	14:26	Ц											0		
		\square		_	\perp	26									2-INCH SCH 40 PVC
		Ц													SOLID
						27									
_			_		_				Black silty fine sand interm	ixed with plast al (dry)	ic, wood, fa	abric,			
_			_	_	_	28				ai (ui y)					1.1
_			_	_	_										
				_	_	29									
_				_	_										
30	14:39			_	+	30							•		
_	14:43		_	_	+		-						0		
_			_	-	+	31									13
_			_	-	+		-								
				+	+	32	-				(1))				
				+	+		-		Black silty fine sand interm wood, metal, fabric, p			istic,			
		\vdash		+	+	33	\vdash						\vdash		
				+	╉	34									
		\vdash		+	+	34									
35	15:04			+	╈	35									
	15:08	Π			1								0		
		Π		\top	╞	36									
					╈										
					╡	37									
					╡				Sand, organic waste, plastic	intermixed wi	h ash, piec	ces of			
						38				ires. Black.	-				
						39									
40	15:24		,	¥		40	,	,		_			•		
	Notes:	btor	= B	Depth elow easuri	top o	of riser									

S		Par	k Od	ıks B	slvd.,	NEE , Suite 100		5	PHASES I-VI LIQUID AS SOUTHEAST C	OUNTY LANDF		3	REPORT (OF BORING : S SHEET JOB NO.	5B-20D 3 of 4 09215600.03
DRILI	LER:	Ia	mpc		336 RR/	A - Cruz, E	erek	, and		HIA, FL HORIZ: ELEV.:	N125083 GROUND :			CHKD. BY	See notes for datum op of PVC (Riser) 192.86
NSPI	ECTOR:			SCS	- L.	Urena/M.	River	a		DATE START	1/23/2		,		1/27/2017
SAMF	PLER:					oon - Start ic Hamme		65'				GR	OUNDWAT	'ER READING	S
METH	HOD:			HSA			•			DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
		4.1	/ 4 !! .		2 0 1	(4" O D	0711	ED	CMP 55 Dell Die						
ASI	NG SIZE:	4-1	/4	l.D. 8	\$ 8-1	1/4 [~] 0.D.	OTH	ER:	CME 55 Drill Rig						
	AUGER			DI	SA EC	MPLE DEPTH	DLC	ows	SAMPLE D	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	N	0.		ес n.)	(Ft.)		57VS 6")					Methane (ppm)		
	8:40	Ν	IA	N	A		N	IS	WAST	E (CONT.)			0		
						41									
						42			Black sand mixed with ash	, organics, deb eces.	ris, rubber	tire			GROUT (TYP)
									pi	eces.					
						43									
				Ц											
						44			more cohesive with some cl	ay (moist)			\vdash	-	
													\mid		
45	9:20					45							*		
		<u> </u>		\square									0	-	
				\square		46			mana dana d				\vdash		2-INCH SCH 40 PVC
									more dense/compacted					-	SOLID
		-				47								-	
_															
						48								-	10
_		-				40			Softer, moist to wet, less del		return cam	ne out		-	
						49			from th	is interval)					
50	9:50					50							+	-	
50	9.50					50							0	-	
						51								-	
															10
						52									
									Black sand and ash interm			ces,			
						53			plastic, wire, organic	s). Moist, not a	is dense.				
														-	
		<u> </u>				54								-	
													- -		10
55	10:10					55							+	-	
		-		\vdash									0		
		\vdash		\vdash		56	$\left - \right $						\vdash	-	
-		\vdash		\vdash			\vdash						\vdash		
		-		\vdash		57	$\left - \right $		Cand and ash intermeter i	h organiz-	n ninc '	fabri -	\vdash	-	
		╞	-	\vdash		EO	\vdash		Sand and ash intermixed wit and plastic.	h organics, me Ioist and black		ιaυΓ1C,	\vdash	-	
				\square		58								-	
				\square		59								-	
		1				57									
60	10:30				,	60		,					+		
		Ì													
	Notes:	bto	r = E	Belov	v top	water o of riser point									

S	CS	EN	GI	NEE	RS	<u>PR</u> PHASES I-VI LIQUID AS	OJECT		c	REPORT C	F BORING : SHEET	SB-20D 4 of 4
	And the second second second	Park O	A DESCRIPTION OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE	, Suite 100	and the second second	SOUTHEAST C			G		JOB NO. CHKD. BY	4 of 4 09215600.03
DRIL	LER:	rumpe		A - Cruz, E	erek, an		HORIZ:	N125083			UUKD. DI	See notes for datum
INSPI	ECTOR:		SCS - L.	Urena/M.	Rivera		ELEV.: DATE START	GROUND 1/23/2				Top of PVC (Riser) 192.86 0 1/27/2017
-	PLER:		Split Sp	oon - Start	ed at 65'			, ,				
METI	IOD.		-	lic Hamme	r		DATE	TIME			ER READIN	
METH	HOD:		HSA				DATE	TIME	DTW	(ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:	CME 55 Drill Rig						
A	UGER		SA	AMPLE		SAMPLE I	ESCRIPTION			H&S	WELL	INSTALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS					Methane		
D	TIME	NO. NA	(in.) NA	(Ft.)	(/6") NS					(ppm) 0		
\vdash	10:30				113	WAST	E (CONT.)					
┝─┤				61								
┝─┤				(2)		Black dense sand and ash	intermixed wit	h fabric, m	netal			
				62		pieces, plastic, ar	nd organics. (m	ioist)				GROUT (TYP)
				63								
				03								
				64								
				51		Metal pieces, amount	of debris less	abundant.				
65		•		65	+					+		
	11:55				31	Start Split Spoo	on Sampling at	65'		0		
		S-1	17	66	32	Ash intermixed with sand, gl	ooo Dlook oow	mantad Di				2-INCH
	¥	5-1	1/		23	asphalt/cemented ash/k						SCH 40 PVC SOLID
	11:57			67	21							
	12:30				7							*
		S-2	16	68	24	Ash, sand with debris, plasti	r wood glass	cardboard	(dry)			
		3-2	10		22	Asii, sanu with teoris, plasti	c, woou, giass,	carubbaru	. (ury)			
	12:32			69	20						69	.0 Bentonite
	13:17				11	Black ash with some sand	l. Newspaper,	plastic, wo	od,			Chips (typ.)
70		S-3	19	70	25		mpacted. (dry			+		
	↓	ļ			19	70.5'				0		
	13:19			71	23	S	AND				71	Jacobia Fine Sand
\vdash	13:50				20						71	.5
\vdash	_	S-4	22	72	67	Gray very fine to fine sa	ind, very comp	acted. (dry	7)			Coarse Sand
\vdash	*				91	Moist						
┝─┤	13:59			73	127						73	2" SCH 40 PVC
┝─┤	15:30	ł			32					\vdash		NO. 10 SLOT SCREEN
┝─┤	\pm	S-5	NR	74	34	Gray fine sand, becoming	g silty, mixed w	ith some c	lay	\vdash		L=2 FT
75	15:35	ł		75	36 10	751					75	
13	15:35 10:40 (1/26)			13	2	75' C	LAY				75	PVC End Cap
	(-/ 20)	İ _	_	76	3	1					/3	
	+	S-6	24	-	3	White silty cl	ay (phosphatio	:)				
	10:42	İ		77	4	77'				+		
Ν	lotes:						E = 77'					
	- BOTTOM	1 OF PVC	END CA	P AND PR	E-PACKE	:TER. COLLECTED SPLIT SPOO D SCREEN SET ~0.3' INTO CLA G MONSOON SUBMERSIBLE P	Υ.			LAY.		
	Notes:	btor = I MP = M	easuring	p of riser	on							

S	and the second second second second second second second second second second second second second second second		aks	Blvd.	NEE , Suite 100	1.200 AL 12.20	PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	GB-21D 1 of <u>4</u> 09215600.03
DRILI	LER:				A - Cruz, E)erek, a		HORIZ: N125					See notes for datum
INSPE	ECTOR:		SC	S - B.	Weglarz/N	4. Rivera		ELEV.: DATE START	GROUND : 2/3/20			DATE END	op of PVC (Riser) 194.30 2/7/2017
SAMP	LER:				oon - start								
METH	100-				lic Hamme Stem Auge			DATE	TIME		OUNDWAT / (ft btor)	ER READING CASING	S STABILIZATION TIME
IVIL II	10D.		110	110 W	Stelli Auge	1		DAIL	TIME	DIV		CASING	STABILIZATION TIME
CASIN	NG SIZE:	4.25"	ID &	8.25"	' OD	OTHER							
А	UGER			SA	MPLE		SAMPLE D	DESCRIPTION			H&S	WELL II	NSTALLATION DIAGRAM
DEPTH			F	REC	DEPTH	BLOWS	1				Methane		Stick-up = 3.00'
DEI	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
	14:59	NA	1	NA		NS	S.	AND			0		
					1		Brown sand with little deb	oris (waste), or	ganic mate	rial,			
								al/ash	-				
					2		2'				↓		GROUT (TYP)
							W	ASTE			0		
			Γ		3								
			Τ										
					4		Black ash, plastic, metal wit	re, paper, piece	of fabric. ((dry)			
			1				1						
5	15:14		\uparrow		5		1				+		
5	15:14		+		5						0		
	13.19		+		6		1						2-INCH
		++	+		6		-						SCH 40 PVC
		$\left \cdot \right $	+		_		1						SOLID
		+	+		7		1				\vdash		
		$\left \cdot \right $	+		ļ	$\left \right $	Black ash,	plastic. (dry)			\vdash		
		$\left \cdot \right $	+		8	-	-				\vdash		10
			+				-				\vdash		
		$\left \right $	+		9	-	4				⊢		
		$\left \cdot \right $	+				-						
10	15:29	$\left \cdot \right $	+		10	\vdash	╡─						
┍──┤	8:38		-	$\left - \right $			4				0		
			+		11	-	4						
		\square	-			-	4						
			+		12		Black ash and silty fine san			astic,			
			+	\square			metai wire.	(slightly moist)					
			_		13		4						
							_						
				Ц	14						+		
							Ash	(moist)			0		
15	9:00				15								
	9:03	\square					1						
					16								
					17								
			Γ				Black ash, plastic, fabric, sil		etal wire, w	vood.			
			Τ		18			noist)					
			Τ]						
					19		1						
			1				1						
20	9:28	+	•	•	20	•	1				•		
20	7.20		+		20		-						
I	Notes:	btor = MP = I	Belo Meas	ow top uring		L based or	observed cuttings from auger	when no split s	poon colle	cted.		<u> </u>	

S						EE		5	<u>PR</u> PHASES I-VI LIQUID AS	<u>OJECT</u> SSESSMENT MO	ONITORING	3	REPORT C	F BORING : S SHEET	2 of 4
	4041			ks Bl , FL 3		Suite 100)		SOUTHEAST C	OUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.03
ORIL	LER:	Tu				- Cruz, D	erel	t, an		HORIZ: N	1250827.	3 E59	6433.6	CHKD. BI	See notes for datum
NSPI	ECTOR:					Veglarz/N				ELEV.: DATE START	GROUND 2/3/2		8	WELL MP: T DATE END	op of PVC (Riser) 194.30
	PLER:					on - start				SILLSIANI	2/3/2				
				Hydi	rauli	c Hamme	r			-				ER READING	
METH	HOD:			Hollo	ow S	tem Auge	r			DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
CASII	NG SIZE:	4.25	5" ID	& 8.	25" (OD	ОТН	ER:							
	ucen				CAD				CAMPLE	FEEDIDTION			H&S		
	UGER			RE		MPLE DEPTH	BLO	OWS	SAMPLEL	ESCRIPTION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	N	0.	(in		(Ft.)		6")					(ppm)		
	9:32	N	ÍΑ	NA	A		N	IS	WAST	E (CONT.)			0		
						21									
						22									GROUT (TYP
					╡										
						23			Black silty fine sand, pla	astic, paper, wa	ste. (moist	:)			
					╡				1					1	K
						24			1					1	
									1					1	
25	9:46					25			1				+	1	
	9:49												0		
		1			╡	26			1				Ī		2-INCH
		┢	\square	+	+				1						SCH 40 PVC SOLID
		1		+	╉	27			1						JOLID
						27			Brown and black silty fine sa	nd mixed was	te- nlastic	naner			*
						28			organics, meta			paper,			
						20									
						29									
						2)									
30	10:15			+	-	30							+		
50	10:25				1	50							0		
	10.25			+	-	31									
						51									
						32									
						52			Black and brown silty fine	sand some cla	v metal sn	000			
				1		33				ling. (moist)	,, inclui op	00111			
		┢		+	+	55			1						
		\vdash		+	+	34			1						
		1		+	╉	51			1						
35	11:22	1			╡	35			1				•		
	11:26				╈	55							0		
		1		\uparrow	╡	36			1						
		1			╡				1						
		1		1	╡	37			1						
		1		+	╉	57			Black silty fine sand, gray sa	nd, plastic cor	per wire	netal			
		1		+	╉	38				. (moist)	r				
		1		+	╉	50			1						
		\vdash		+	+	39	-		1						
		┢	\vdash	+	+	37	-	\vdash	1						
40	12.17	Ι,		+	+	40	— ,	-	1						
τU	12:17	\vdash	,	*	+	40									173 - 175 - 1974
	Notes:	bto	r = B	elow	top	water of riser g point			<u> </u>					<u> </u>	

ER: TOR: ER: DD: SIZE: GER 12:21	Tamı	na, FL TIE SCS Spli Hyd Hol	Ivd., Suite 33610 IRRA - Cri - B. Wegla t Spoon - s Iraulic Han low Stem A 225" OD	uz, De arz/M start a mmer	erek, and . Rivera		HIA, FL HORIZ: N ELEV.:				JOB NO. CHKD. BY	09215600.03 See notes for datum op of PVC (Riser) 194.30
TOR: ER: DD: SIZE: GER TIME	4.25"	TIE SCS Spli Hyd Hol	RRA - Cri - B. Wegla t Spoon - s Iraulic Hai low Stem J	arz/M start a mmer	. Rivera	d Ben					WELL MD. T	
ER: DD: GSIZE: GER TIME		Spli Hyd Hol	t Spoon - s Iraulic Hai Iow Stem J	start a mmer								on of PVL (Picor) 194.20
DD: S SIZE: GER TIME		Hyd Hol	lraulic Hai low Stem J	mmer	t 65'		DATE START	2/3/20			DATE END	
SIZE: GER TIME		Hol	low Stem .						GR	OUNDWAT	ER READING	ç
ger TIME				Auger			DATE	TIME		(ft btor)	CASING	STABILIZATION TIME
ger TIME		ID & 8	.25" OD									
TIME	NO.				OTHER:	r						
	NO.		SAMPLE	1		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
	110.		EC DEP n.) (Ft		BLOWS (/6")					Methane		
12:21	NA	N	-	· •	ŊS	147 A C'T'	E (CONT.)			(ppm) 0		
		Ť		1		WASI	E (CONT.)					
			43	1								
	$\left \cdot \right $	+								\vdash		
	\vdash	+	42	4						\vdash		GROUT (TYP
	\vdash	+		,		Black silty fine sand, meta	l, plastic, clav. (slightly mo	oist)			
	\vdash	+	43	3		., .,		5.7				
	$\left \cdot \right $	+		4								
	\vdash	+	44	Ŧ								
12.22	$\left \cdot \right $	+		_		4				•		
			4:									
17:22	$\left \cdot \right $	+		6		4						2-INCH
	$\left \cdot \right $	+	40	U		4						SCH 40 PVC SOLID
	$\left \cdot \right $	+	-	7								SOLID
	\vdash	+	4	/								4
						Black silty fine sand, p	olastic, metal, fa	bric. (dry)				
			40	0								
	$\left \cdot \right $	+				4						
		+	4	,								
12.47	+	+								¥		
		+	5							0		
10.04			5	1								
				-								
			۲.	2								
			5	3		Black silty fine sand,	plastic, metal, v	nre. (dry)				
			54	4								
												11
13:03			5!	5						•		
13:09										0		
			50	6								
			5	7								
						Plack city fine and	alactic mina f-1	mic (dur)				
		\square	51	8		DIACK SILLY TINE SAND,]	piasuc, wire, fa	nic. (ury)				
			59	9								
13:21	↓ ↓		6	0	¥					•		
	13:09	12:39	12:39	12:39	12:39 I I 46 I I I 46 I I I 47 I I I 47 I I I 47 I I I 47 I I I 48 I I I 48 I I I 49 I I I I I2:52 I I I I I2:52 I I I I I2:52 I I I I I3:03 I I I I I3:03 I I I I I3:03 I I I I I3:01 I	12:39 I I 46 I I I I 46 I I I I 47 I I I I 47 I I I I 47 I I I I 48 I I I I 48 I I I I 49 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I <tdi< td=""> <tdi< td=""></tdi<></tdi<>	12:39 1 1 46 1 1 1 46 1 1 1 1 47 1 1 1 1 48 1 1 1 1 48 1 1 1 1 48 1 1 1 1 49 1 1 12:47 1 50 1 1 12:52 1 51 1 1 1 1 52 1 1 1 12:52 1 52 1 1 1 1 1 53 1 1 1 12:52 1 1 52 1 1 1 13:03 1 55 1 1 1 1 13:03 1 56 1 1 1 1 13:03 1 58 1 1 1 1 13:03 1 58 1 1 1 1	12:39 I <td>12:39 I<td>12:39 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I2:47 I I I I I I I2:52 I I I I I I I2:64 I I I I I I I2:10 I I I I I I I I2:20 I I I I I I I I I3:03 I I I I I I I I<td>12:33 1<td>12.33 1 1 4 1 1 12.39 1 1 1 1 1 1 12.39 1 1 4 1</td></td></td></td>	12:39 I <td>12:39 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I2:47 I I I I I I I2:52 I I I I I I I2:64 I I I I I I I2:10 I I I I I I I I2:20 I I I I I I I I I3:03 I I I I I I I I<td>12:33 1<td>12.33 1 1 4 1 1 12.39 1 1 1 1 1 1 12.39 1 1 4 1</td></td></td>	12:39 I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I2:47 I I I I I I I2:52 I I I I I I I2:64 I I I I I I I2:10 I I I I I I I I2:20 I I I I I I I I I3:03 I I I I I I I I <td>12:33 1<td>12.33 1 1 4 1 1 12.39 1 1 1 1 1 1 12.39 1 1 4 1</td></td>	12:33 1 <td>12.33 1 1 4 1 1 12.39 1 1 1 1 1 1 12.39 1 1 4 1</td>	12.33 1 1 4 1 1 12.39 1 1 1 1 1 1 12.39 1 1 4 1

S	CS	EN	GI	NEE	R S	PHASES I-VI LIQUID AS	<u>OJECT</u> SSESSMENT MO	ONITORING		REPORT C	F BORING : S SHEET	3B-21D 4 of 4	
	4041		aks Blvd. 1, FL 336	, Suite 100	0	SOUTHEAST C	OUNTY LANDF				JOB NO.	092156	00.03
RIL	LER:	Tampo		A - Cruz, E)erek, an		HIA, FL HORIZ: N	1250827.	3 E596	433.6	CHKD. BY	See not	es for datum
JSDI	ECTOR:		SCS - B	Weglarz/N	A Rivera		ELEV.: DATE START	GROUND = 2/3/20					C (Riser) 194.30
	LER:			oon - start			DATE START	2/5/20	,1,		DATE END	2/7/201	.7
			-	lic Hamme							ER READING	I	
IETH	HOD:		Hollow	Stem Auge	r		DATE	TIME	DTW	(ft btor)	CASING	STAE	BILIZATION TIME
ASI	NG SIZE:	4.25" II	0 & 8.25	' 0D	OTHER:								
A	UGER		SA	AMPLE		SAMPLE D	DESCRIPTION			H&S	WELL I	NSTALLA	TION DIAGRAM
иерин			REC	DEPTH	BLOWS					Methane			
D	TIME	NO.	(in.)	(Ft.)	(/6") NS					(ppm) 0		80	2
-	13:22	NA	NA		INS I	WASTI	E (CONT.)			0			
_				61									
_													
-				62									GROUT (TYI
				(2)		Black silty fine sand, p	lastic, metal, fa	bric. (dry)					
+		\vdash		63		1							K
┥				64		1							
╡				0-2		1							
5	13:41	+	•	65	+	1				+			
	13:49				23	Start Split Spoo	on Sampling at	65'		0			SCH 40 PV
		C 1	6"	66	29	Waste- metal, plastic, glass,	intermixed wit	h black eilt	ufino				2-INCH SOLID
		S-1	6		31		and.	II DIACK SILU	y nne				
	13:51	Ι		67	86]						•	-
	14:09				18								
		S-2	14.4"	68	27	Gra	y sand.						8
					20			· · · · · · · · · · ·					0
	14:10			69	28	Waste- plastic, styrof	oam, wood, pa	oer, glass.					
	14:32	ļ			13	Dark stain	ed gray sand.						
0		S-3	14.5"	70	14	Dark Starr	eu gi ay sailu.			¥			2
		ł			140		Vood			0	70.5		7
_	14:35			71	19	Gray sand intermixed	with waste- pa	per, plastic					8
_	14:53	ł			10	71.5'	AND						Bentonite
_		S-4	11"	72	12	-	AND						Chips (typ
		ł			21	Coarse gra	ay sand (dry)						
┥	2:55			73	32								8
+	14:55	ł		74	36 39	1					73.5		Eine Carri
		S-5	24"	/ 4	55	Coarse gray	y sand. (moist)						Fine Sand
5	15:11	1		75	75	1				+			
	15:26				7					0	75.5		
		e /	19.2"	76	18	C	reand (maint)						Coarse San
		S-6	19.2		26	Loarse gray	/ sand. (moist)				76.4		
	15:28			77	21								2" SCH 40 P NO. 10 SLO
	15:45				5			6.3					SCREEN
		S-7	23.6"	78	7	some water ca	ime out of tube	(wet)					L=2 FT
					5	70.21					_		PVC End
	15:45			79	7		LAY ay (phosphatic			¥	78.4		e L
	- BOTTOM	1 OF PVC	END CA		E-PACKE	В	OE = 79' Y.						
_	Notes:												
			Depth to Below to	o water p of riser									

S		Par	rk Od	ıks Bl		EE uite 100		S	PHASES I-VI LIQUID AS SOUTHEAST C			â			B-22D 1 of <u>4</u> 092156 	00.03
DRIL	LER:					Cruz, E)erel	k, and		HORIZ:	N125091		96382.9			tes for datum
INSPI	ECTOR:			SCS -	B. We	eglarz/N	A. Riv	vera		ELEV.: DATE START	GROUND 2/7/2)	WELL MP: To DATE END		C (Riser) 193.05
	PLER:					n - Start				DATESTART	_, . , _			DATE LIND	2/0/20	17
						Hamme						GR	OUNDWAT	ER READINGS	5	
METH	HOD:			Hollo	ow -Ste	em Aug	er (H	SA)		DATE	TIME	DTV	/ (ft btor)	CASING	STAI	BILIZATION TIME
							0.000									
LASI	NG SIZE:	4-1	L/4" I.	D. & 8	-1/4" 0).D.	OTH	IER:	I				1			
	UGER				SAMP	PLE			SAMPLE D	DESCRIPTION			H&S	WELL IN	ISTALLA	TION DIAGRAM
DEPTH				RE		EPTH		OWS					Methane			Stick-up = 3.0
DE	TIME	N	١0.	(in.	.)	(Ft.)	(/	6")					(ppm)		con l	
	13:45	1	NA	NA	1		Ν	١S	S	AND			0			<u> </u>
						1			Brown sand with little deb	ris (waste) or	ranic mate	rial			22	
										al/ash	Sume mate				38	
						2			2'							GROUT (TYP)
\neg		\vdash		\vdash		2			2	ASTE					28	
-+		┢	-	\vdash	+		\vdash		-							
-+		┢	-	\vdash	_	3	\mathbb{H}								12	K
		_	-	\vdash	_		\square		Black and brown silty fine s	and intermixed	with met:	al and				
		_	_	\vdash		4	\square			c. (moist)					12	
				\square			Щ								63	
5	14:00					5							•			
T	14:05			$ \top$			1						0		58	
		1				6										2-INCH
						0									12	SCH 40 PVC SOLID
				\vdash		-										SOLID
		-				7			Harder drilling, black silty fi	ne sand metal	wire brow	m siltv				=
					_				fine sand, metal chunks, pl	astic, nail, fabr						
						8			(very	y moist)						10
						9									12	2
															12	
10	14:36					10							+			
	14:41												0		12	
						11									23	
																10
						10										
		-				12										2
		-							Black silty fine sand interm meta	ixed with plast al. (dry)	ic, fabric, v	vood,			13	
					_	13				,						
			-	\vdash			\square								12	
		_	_	\square		14	\square								23	
		<u> </u>	-	\square			Щ									10
15	14:55					15	Щ						*		28	
	15:00												0		18	2
_ [16									12	
							Π								13	
		1				17			1						12	
		\vdash		\vdash		1/	\vdash		Black silty find and inter-	ived with	natio	abric				
-		\vdash	-	\vdash	+	10	\vdash		Black silty fine sand interm and me	tal. (moist)	, piasut, Ia	adi IC,				10
		┝	-	\vdash		18	\vdash								200	
		-	-	\vdash	_		\vdash								18	2
			-	\vdash		19	\square								13	
		<u> </u>	<u> </u>	\vdash											13	2
20	15:08	Ľ	*	*		20	•						*		555	
	Notes:	bto MF	or = E P = M	elow easur	to wa top of ing po CRIPT	f riser vint	based	d on o	observed cuttings from auger	when no split s	poon colle	cted.				

S	C S 4041	Par	k Oa	ks Bl	vd., \$	Suite 100		5	PHASES I-VI LIQUID AS SOUTHEAST C	OUNTY LANDF		3	REPORT C	F BORING : S SHEET JOB NO.	SB-22D 2 of 4 09215600.03
ORIL	LER:	Ta	mpa,			0 - Cruz, D	erek	and		HIA, FL HORIZ:	N125091	38 E5	96382.9	CHKD. BY	 See notes for datum
										ELEV.:	GROUND	= 190.0			op of PVC (Riser) 193.05
	ECTOR:					Veglarz/N				DATE START	2/7/2	017		DATE END	2/8/2017
SAMP	PLER:					on - Start c Hamme		•				GR	OUNDWAT	ER READING	S
METH	HOD:			Hollo	ow -S	Stem Aug	er (H	SA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
				_											
CASI	NG SIZE:	4-1	/4" 1	.D. &	8-1/	4" O.D.	OTH	ER:	Γ						
	AUGER					APLE			SAMPLE I	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			~	RE		DEPTH)WS					Methane		
D	TIME		0.	(in. NC	-	(Ft.)	-	6") 16					(ppm)		101 234
	15:15		IA	INC.	-			IS	WAST	E (CONT.)			0		
						21									
						22									GROUT (TYP
						23			Harder drilling, black silty fi			waste,			
_1		[]	_1		[]				wood, plasti	c, metal, fabric					
					T	24									
		П			╡									1	
25	15:38	П			╈	25			1				•		
~	15:43	П			1								0		
	13.43			+	+	26									2-INCH
		\vdash		+	+	20	\vdash						\vdash		SCH 40 PVC
		\vdash		+	+										SOLID
-		\vdash		+	-	27									
_		\vdash		-	-				Black silty fine sand interm plasti	ixed with wast c, fabric.	e- wood, n	ietal,			
				+	-	28									1.1
		_		_											
				_		29									
30	16:04					30							+		
	16:08												0		
						31									
						32									
									Black silty fine sand interm	ixed with waste	e- plastic, v	vood.			110
						33			Hit something very	hard at 32 feet	t, metal.				
					T										
					╈	34			1					1	
		1			╈									1	
35	16:36	1		1	╈	35			1				+		
	8:55				╈	55							0		
	0.00			+	+	36	-								
		\vdash		+	+	30									
		╞		+	╉	0.7	-						\vdash		
-		-	\vdash	\dashv	+	37		-							
		-	$\left \right $	\dashv	+				Dark brown silty fine sa	nd, organics, pl	astics, woo	od.	\vdash		
		-	\vdash	+	+	38	-						\vdash		
		-	\vdash	-	+								\vdash		
		-	$\left \cdot \right $	-	+	39									19 K
		<u> </u>	\square	-	+			_					\vdash		
40		<u> </u>	¥	•	'	40	,	V					•		
	Notes:	bto	r = B	elow	top	water of riser point									

45 9: 45 9: 100 100 100 100 100 100 100 100 100 10	POR: R: D: SIZE:	4-1/4 NO. NA	SC: Spl Hy Ho " I.D. R (1	S - B. ' it Spo draul llow - & 8-1	A - Cruz, E Weglarz/M Joon - Start ic Hamme -Stem Auge -/4" O.D. MPLE DEPTH (Ft.) 41	M. Rivera at 65' r er (HSA)	SAMPLE E	HORIZ: ELEV.: DATE START DATE ESCRIPTION	N1250913 GROUND = 2/7/20 TIME	190.0 17 GR(
SAMPLER METHOD: CASING S AUGE E E E E E E E E E E E E E E E E E E	R: D: SIZE: ER FIME D:04	NO.	Spl Hy Ho " I.D. R (i	it Spo draul llow - & 8-1 SA EC n.)	oon - Start ic Hamme -Stem Auge ./4" O.D. MPLE DEPTH (Ft.)	at 65' r er (HSA) OTHER: BLOWS (/6")	SAMPLE E	DATE START	2/7/20	GR0)UNDWAT (ft btor)	DATE END ER READING	2/8/2017 S
METHOD: CASING S AUGE E - - - - - - - - - - - - -	D: SIZE: ER FIME 9:04	NO.	Hy Ho " I.D. R (i	draul llow - & 8-1 SA EC n.)	ic Hamme Stem Augo /4" O.D. MPLE DEPTH (Ft.)	r er (HSA) OTHER: BLOWS (/6")	SAMPLE D		TIME		(ft btor)		
CASING S: AUGE Edia TI 9: 10 10 10 10 10 10 10 10 10 10 10 10 10	SIZE: ER TIME 9:04	NO.	Ho " I.D. R (i	llow - & 8-1 SA EC n.)	Stem Augo /4" O.D. MPLE DEPTH (Ft.)	er (HSA) OTHER: BLOWS (/6")	SAMPLE D		TIME		(ft btor)		
CASING S: AUGE Edia TI 9: 10 10 10 10 10 10 10 10 10 10 10 10 10	SIZE: ER TIME 9:04	NO.	" I.D. R (i	& 8-1 SA EC n.)	/4" O.D. MPLE DEPTH (Ft.)	OTHER: BLOWS (/6")	SAMPLE D		TIME	DIW		CHOING	5111DIELETTION TIME
AUGE E 1 99 11 97 1 1 1 1 1 1 1 1 1 1 1 1 1	ER	NO.	R (i	SA EC n.)	MPLE DEPTH (Ft.)	BLOWS (/6")	SAMPLE D	ESCRIPTION			H&S		1
На	FIME 9:04	-	(i	EC n.)	DEPTH (Ft.)	(/6")		ESCRIPTION			H&S		
На	FIME 9:04	-	(i	EC n.)	DEPTH (Ft.)	(/6")						WELL IN	NSTALLATION DIAGRAM
99 99 1 1 1 1 1 1 1 1 1 1 1 1 1	9:04	-	-	-							Methane		
45 9:		NA		1C	41	NA I					(ppm)		
9. 	9:35				41	1	WAST	E (CONT.)			0		
9. 	9:35							()					
9. 	9:35												
9. 	9:35						-						
9. 	9:35				42		-						GROUT (TYP)
9. 	9:35					-	Plaak ailter fin d inter	ad with	n alu d'	loot? -			
9. 	9:35				43		Black silty fine sand intermix	ed with waste vire.	including p	idStIC,			
9. 	9:35						4						
9. 	9:35	1 1			44		1						
9. 	9:35												
99 1 1 1 1 1 1 1 1 1 1 1 1 1	9:35				45								
50			T				1				0		
					46		1						2-INCH
					40		1						SCH 40 PVC
			+				-						SOLID
			+		47		-						
							Black silty fine sand intermix	ed with waste vire.	including p	lastic,			
					48		-	/ire.					13
					49								
					50						+		10
	9:52										0		
	5.52		+		51								
				_	51		-						162 B
			+				-						
			+		52		-						
							Black silty fine sand intermix	ed with waste vire.	including p	lastic,			
					53		-	ne.					
		\square				$\mid \mid \mid$	4						
					54								
]						
55				_1	55						•		
	0:14										0		
	,	\square			56		1						
		+	+		50		1						
		\vdash	+				1						
		++	+	-+	57	-	1						
		$\left \right $	+			-	Black silty fine sand with hi	gh paper and p etal pieces.	lastics con	tent,			12
		\parallel	+		58	\vdash							
		\square					4						
		\square			59		1						
]						
60		•		<u> </u>	60	¥							
											*	'	
Note						!	<u>I</u>						
	tes:				water								
	tes:				o of riser point								
	tes:	1411.	redS	111g	point								

S	CS	EN	GI	NEE	R S	<u>PR</u> PHASES I-VI LIQUID AS	<u>OJECT</u> SSESSMENT MO	ONITORINO		REPORT C	OF BORING : SHEET	SB-22D 4 of 4
	4041		aks Blvd a, FL 33	., Suite 10 610	0	SOUTHEAST C	OUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.03
RIL	LER:		TIERF	A - Cruz, I	Derek, an	d Ben	HORIZ: ELEV.:	N125091 GROUND		6382.9	WELL MP: '	See notes for datum Top of PVC (Riser) 193.05
	ECTOR:			. Weglarz/!			DATE START	2/7/2				2/8/2017
AMI	LER:			ooon - Start ılic Hamme					GRO	UNDWAT	ER READIN	GS
1ETI	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTW	(ft btor)	CASING	STABILIZATION TIME
ASII	NG SIZE:	4-1/4"	I.D. & 8-	1/4" 0.D.	OTHER:							
		, .		AMPLE		CAMPLE	FCCDUPTION			H&S	MATCH 1	
	UGER		REC	DEPTH	BLOWS	SAMPLE I	DESCRIPTION			Methane	WELL	INSTALLATION DIAGRAM
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
	10:33	NA	NC		NA	WAST	E (CONT.)			0		
				61					-		-	
_			$\left \right $						-		-	
\neg			$\left \right $	62					-		-	GROUT (TYP
		$\left \cdot \right $	+		$\left \right $				-			
		\vdash		63	$\left \right $	Brown organi	cs, plastics, fibe	ers.	╞		-	E E
		\vdash		64					╞			
		\vdash		04		•			╞		-	
65	10:48	•	+	65	+	1			F	+		
-					12	Start Split Spoo	on Sampling at	65'	+	0		53 F
		S-1	20.4"	66	15	Silty fine to	med sand. (dry)	F]	SCH 40 PVC
		3-1	20.4		16]			[2-INCH SOLID
	10:56			67	12	Wa	ste/ash					
	11:05	ļ			8	Wa	ste/ash					*
		S-2	16.8"	68	7	Silty me	dium sand				-	
		ł			12				+		-	
	11:09			69	28	Fibrous v	vaste, carpet	· - ·	+		-	
_	11:23	$\frac{1}{2}$			18				-		-	
70		S-3	3"	70	12	Waste a	nd ash (dry)		-	▼ 0	-	
	11.26	1		71	13				F	1	70.	5 Bentonite
	11:26 12:27			71	15 10	71.6'			-			Bentonite Chips (typ.
	12.27	1		72	16		AND				-	
		S-4	13"		19							
	12:32	1		73	22							
	12:48				12						73.	5 Fine Sand
		S-5	20.5"	74	22	Gray coars	e Sand (moist)					K K
					30				Ļ			Coarse San
75	12:50		<u> </u>	75	43	•			F		75	.0
		ł			11				╞	0	▼ 75.	2 30114011
		S-6	15"	76	24	76' wet			╞	_	-	NO. 10 SLO' SCREEN
		$\frac{1}{2}$			13				┝			L=2 FT
	40.75			77	10	76.8'	LAY		-+	_	77.	
\neg	13:03	1		70	1				╞	_	77.	^{.3} ^{.6} PVC End C
		S-7	2"	78	2	Moi	st Clay		╞		-	
79	13:03	1		79	6	79'			F	+		
ľ	lotes: - ADVANC - BOTTOM	1 OF PV	CEND C	77.5', THEMAP AND PR	N COLLEC		Y.	M TOP OF	CLAY.			
	General N	DTW = btor =	Depth t Below to Ieasurin	op of riser								

S		ark (Daks		Suite 100			PHASES I-VI LIQUID AS SOUTHEAST CO			G	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	B-23D 1 of 5 09215600	.03
DRIL	LER:	run			A - Cruz, I)ereŀ	, and		HORIZ:	N125064	42.4 E5	96444.3	CHRD. D1	See notes	for datum
NOD	C.T.O.D.		0	66 D					ELEV.:	GROUND					Riser) 199.70
	ECTOR:				Weglarz/l				DATE START	1/27/2	2017		DATE END	1/30/2013	7
AMI	PLER:				oon - Start lic Hamme		70				GR	OUNDWAT	ER READING	S	
иеті	HOD:			-	-Stem Aug		SA)		DATE	TIME		(ft btor)	CASING		IZATION TIME
				.011011	bieni nug	0. (011)		Dirit		511	(10000)	GIIDIIIG	UTIDIE	
CASII	NG SIZE:	4-1/	4" I.I). & 8-1	L/4" O.D.	ОТН	ER:								
												H&S		1	
	AUGER				MPLE			SAMPLE D	ESCRIPTION				WELL IN	ISTALLATI	ON DIAGRAM Stick-up = 3.2
DEPTH		NO		REC	DEPTH)WS					Methane			Stick-up = 3.2
ā	TIME	NO	-	(in.)	(Ft.)		6")					(ppm)		100	
	15:45	NA	1	NA		N	IC	S	AND			0		22 S	
				1	1									82 - 82	
			T					Brown sand with some	organic mater	ial and so	d				
\neg		\vdash	+	+			\vdash							12	
\neg		\vdash	+		2	-	$\left - \right $	2'	A (7717)					1	GROUT (TYP
		\square				<u> </u>		W	ASTE			└──		12 E	(
					3	L)
٦			Τ												
\neg			+		4			Sand intermixed with w		s, metal, r	ags,				
		\vdash	+		4	-	$\left - \right $	fabric, pla	stic, wood)			\vdash			
		\vdash	-+				\square								
5	16:00	Ц			5			L				+			
	NA (1/30)											0		88 B	
					6									18	2-INCH
		\vdash	+		0		\square								SCH 40 PVC
				_											SOLID
					7										<i></i>
								Organics, plastics.	Loosoly comp	acted				•	
					8			organics, plastics.	Loosely comp	acteu.				68 £3	
_														3X - 33	
				_	9										
10					10							+			
	8:45 (1/30)											0			
	0.15 (1/50)				44							U U		熊 筋	
_					11										
				_											
					12									25 23	
								Dark organics plactics	fibore Loocolu	compacto	d			10	
1		ΙT	Τ		13		$ \neg$	Dark organics, plastics,	incers. LOUSELY	compacte	ц.				
						1									
		\vdash	+			-	\square					\vdash			
		\vdash	+		14	-	\square					┣─┼──			
		\square	\square				\square					⊢			
15	9:39				15							+		38	
Τ		ΙT	Τ				1		_		_	0		18	
			╈		16										
		\vdash	+		10		\square								
		\vdash	+		L	-	\vdash					\vdash			
		\vdash	\perp	_	17	<u> </u>						⊢			
								Dark organics, fibers, pl			is.				
T		ΙT	Γ		18		1	Moderately moist, n	noderately con	pacted.					
		\square	╈											<u>88</u>	
		┢┼┤	+		<u> </u>		\vdash					\vdash		15	
		\vdash	+		19	-	\vdash					\vdash			
		\square													
20	10:19	♦		♦	20		↓					¥			
Į	Notes:	btor MP =	= Be Mea	low top suring		hace	lor	observed cuttings from auger v	when no critic -	noon co ¹¹	acted		•		

S	C S 4041	Park	a Oa mpa	ks Bl , FL 3	vd., 3361)	PHASES I-VI LIQUID AS SOUTHEAST C LIT			3	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	B-23D 2 of 5 09215600.03
DRIL	LER:			TIEF	RRA	- Cruz, D	erek, a	nd Ben	HORIZ: ELEV.:	N125064 GROUND			WELL MD-T	See notes for datum op of PVC (Riser) 199.70
INSPI	ECTOR:			SCS -	- B. V	Veglarz/N	1. Rivera		DATE START	1/27/2			DATE END	
SAMF	PLER:					on - Start								
METH	JOD.					c Hamme Stem Aug			DATE	TIME		/ (ft btor)	ER READING CASING	S STABILIZATION TIME
MEIF	HUD:			пош	0w -3	stem Aug	er (nsaj		DATE	TIME	DIW	(IL DIOF)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1	/4" I	.D. &	8-1/	4" O.D.	OTHER		-					
Δ	AUGER				SAN	IPLE		SAMPLET	ESCRIPTION			H&S	WELLIN	STALLATION DIAGRAM
	IUULIN			RE		DEPTH	BLOWS	1				Methane	WEBE II	
DEPTH	TIME	N	0.	(in		(Ft.)	(/6")					(ppm)		
	10:19	Ν	A	NA	ł		NA	WAST	E (CONT.)			0		
						21]						
			-	+		22		-						CDOUT (TUD)
		╉╌┤	-	+	+	22	\vdash	4						GROUT (TYP)
		+	_	+	+			Dark brown organics, mo	lerately moist	No signifi	ant			
		+	_	+	+	23	\square	change in subsurface				\vdash		
-+		+	_	+	+			4				⊢⊢		
		$\left \cdot \right $	_	+	+	24		4				\vdash		
					+			4				\vdash		
25		\downarrow				25						*		
	11:22	\square						_				0		
[26								2-INCH
		\square			Τ									SCH 40 PVC SOLID
		\uparrow				27		1						
				+	+			1						*
						28		Dark gray silty sar	d, plastics and	fibers.				
						20		-						
		+	_	+				-						SX 12
			_			29		-						
				_				_						
30						30						•		
	11:52							_				0		
						31		_						
								_						
						32								
								Dark grav silts	sand with was	te				
						33		Zank gray Silly						
_ 1		[]		_ [_ [
						34								
]						10
35					T	35		1				•		
	12:28											0		
	-2.20			+	+	36		1				Ĩ		
			\square	+	+	30		1						
		\vdash	\vdash	+	+	c-	\vdash	4				\vdash		
-+		+	\vdash	+	+	37	\vdash	4				\vdash		
		\vdash	\vdash	+	+			Dark brown, mode	ate moisture, p	plastics.		\vdash		
				+	+	38		4						
		\vdash			+			4				- -		12 C
						39		4				\square		建
								1						
40		Ľ	•	¥		40	+					♦		
					Τ				· — • • •					
	Notes:	bto	r = B	elow	top	vater of riser g point								

S	C S 4041	Par	k Oc ımpa	ıks Bl , FL 3	lvd., 3361	Suite 100	0		PHASES I-VI LIQUID AS SOUTHEAST CO LITI	DUNTY LANDF HIA, FL		G	REPORT C	DF BORING : S SHEET JOB NO. CHKD. BY	B-23D 3 of 5 09215600.03
DRILI	LER:	_	_	TIE	RRA	- Cruz, I)erel	k, and	d Ben	HORIZ: ELEV.:	N125064 GROUND			WELL MP. T.	See notes for datum op of PVC (Riser) 199.70
NSPE	ECTOR:					Veglarz/I				DATE START	1/27/2		,	DATE END	
SAMP	'LER:					on - Start		70'				(D	0111101111		
/FTF	IOD:					c Hamme Stem Aug		SAL		DATE	TIME	1	/ (ft btor)	ER READING	S STABILIZATION TIME
VILLII	10D.			11010	0 - 0	stelli Aug	ei (ii	SAJ		DATE	TIME	DIV		CASING	STADILIZATION TIME
CASIN	IG SIZE:	4-1	/4"	.D. &	8-1/	/4" O.D.	OTH	IER:							
А	UGER				SAN	MPLE			SAMPLE	ESCRIPTION			H&S	WELL IN	NSTALLATION DIAGRAM
	oun			RE	T	DEPTH	BLO	ows	on the base				Methane		
DEPTH	TIME	N	0.	(in	.)	(Ft.)	(/	6")					(ppm)		
	13:10	Ν	٨A	NA	A		N	٩S	WAST	E (CONT.)			0		
Т				1		41									
							П							1	
\dashv		1		\square	1	42	Η							1	GROUT (TYP)
\neg				\vdash	+	14	H								
\dashv				\vdash	+	42	\vdash								
\dashv		╞	\square	\vdash	+	43	\vdash		Dark br	own, silty.			\vdash		\checkmark
\dashv		┝	\vdash	\vdash	+		\vdash						\vdash		
\dashv		┝	\vdash	\vdash	+	44	\vdash						\vdash		
_		-	\square	\vdash	+		$\left \right $						\vdash		
45	13:40	-			+	45	\mid						*		
\dashv		<u> </u>		\square									0		
						46	Ц								2-INCH SCH 40 PVC
															SOLID
						47									
									Dark brown, silty, dry wi	th paper and p	lactic dobr	ric			*
						48			Dark brown, sinty, dry wi	tii paper and p	lastic debi	13.			
						49									
50						50							+		
	14:12												0		
						51									
						01								-	
						52								-	
						52								-	
			\square	\square	+	F 2			Dark br	own, silty.			\vdash		
			\square	\vdash	+	53	\vdash						\vdash		
		┝	+	\vdash	+		\vdash						\vdash		
\dashv		\vdash	+	\vdash	+	54	$\left \cdot \right $						\vdash		
		\vdash	+	\vdash	+		$\left \cdot \right $						+		
55		-				55	\vdash								
\neg	14:31	╞	+	\vdash	+		\vdash						0		
		-	+	\square	+	56	$\left \cdot \right $						\vdash		
_		┝	+	\vdash	+		\vdash						\vdash		
\rightarrow		-			+	57	$\left \cdot \right $								
\dashv			$\left \right $		+		\vdash		Dark gray, sil	ty, some plastic	s.		\vdash		
-				\square	-	58	\vdash						\vdash		
_		_			\downarrow		\square						\vdash		
$ \downarrow$		<u> </u>			\downarrow	59	\square						\mid		
							\square								
60	15:09		¥	•	'	60	•	,					+		
Ì	Notes:	bto	r = B	elow	' top	water of riser point									

S		Park Oc	aks Blvd.	NEE , Suite 100	and the state of the	PHASES I-VI LIQUID AS SOUTHEAST CO	OUNTY LANDF		3	REPORT C	OF BORING : S SHEET JOB NO.	5B-23D 4 of 5 09215600.03	
ORIL	LER:	Tampo	1, FL 336 TIERR	510 A - Cruz, E)erek. an		HIA, FL HORIZ:	N125064	2.4 E5	96444.3	CHKD. BY	See notes for d	latum
	ECTOR:						ELEV.:	GROUND	= 196.5			op of PVC (Riser)	
	PLER:			Weglarz/N oon - Start			DATE START	1/27/2	2017		DATE END	1/30/2017	
AMI	LLK.			lic Hamme					GR	OUNDWAT	ER READING	S	
1ETH	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZAT	ION TIME
ASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:								
		,.			0111210					H&S			
	UGER		SA REC	MPLE DEPTH	BLOWS	SAMPLE D	ESCRIPTION			Methane	WELL I	NSTALLATION D	IAGRAM
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)			
			NA		NC	WASTE	E (CONT.)			0			
				61			(conn)						
				01							-		
				62		-					-	CP	OUT (TYP
		1		02		1						GR	
\neg		1		63		Dark brown, silty, dry organ		s of plastic	and				
\neg				03			sture.						
				64		1					-		
				04		1					-		
65				6 F		1				•	-		
00	15 40			65						0	-		
_	15:18					-				0		sc	CH 40 PVC
				66		-					-	TO KON NUMBER OF COMMENDATION OF COMMENCOM OF COMMENCO	2-INCH
						Dark brown organi	cs moderatels	moist			-		SOLID
_				67		Bark brown organi	es, moderately	moist.			-	K	
_				68		-							
_						-					-		
_				69		69' "hard" layer, most	ly dark organi	cs Some			-		
						metal pieces.	iy uai k oi gaili	cs. some			-		
70	15:47			70	*	Start Split Spoo	n Sampling at	70'		•	-		
		-			32	W	aste			0	-		
_		S-1	24	71	78 34		and	· — ·			-		
_		-					klinker				-		
	16:12			72	26	Waste, wood, f		iss			-		
_	12:34	-			11	Wast	e (dry)				-		
		S-2	23.5	73	12	Black s	and (dry)						
		┦			30	Sand, metal, wood, as	h, wood, ceran	nics (dry)		\vdash	-		
	16:36			74	20			,		\vdash	-		
	8:21	┦			8	Black sand and waste intern	nixed with org	anics and f	abric.				
75		S-3	19	75	8		iry)			↓	-		
		┦			11		wood (dres)			0	-		
	8:22			76	15	Piece of v Waste and san	wood. (dry) d. (dry to moi:	st)				2	
	8:52	+			8	Waste- newspaper, wo							
		S-4	23	77	25	Ash with glass. (mostly	y dry w/ bit of	moisture)					
		4			27	Waste- fabric, new	/spaper. wood	(drv)					
	8:55			78	21							1	
	9:18	ł			26	Black sand with	waste, some w	vood		⊨–	78.5	111 111	and a state
		S-5	20.4	79	28	79'				- -	-		entonite lips (typ.)
		ł			60	-	AND			- -	-		
80	9:22			80	101	Gray fine sand, very co	mpacted (slig	ntly moist)		↓	-	<u> </u>	
	Notes:	btor = E	Depth to Below to easuring	p of riser									

S	CS	EN	GI	NEE	RS			<u>OJECT</u>			REPORT C	F BORING : S	
				, Suite 100		F	PHASES I-VI LIQUID AS SOUTHEAST CO			i		SHEET JOB NO.	5 of 5 09215600.03
			1, FL 336					HIA, FL				CHKD. BY	
DRIL	LER:		TIERR	A - Cruz, D	erek, and	d Ben		HORIZ: ELEV.:	N125064 GROUND :			WELL MP. T	See notes for datum op of PVC (Riser) 199.70
INSPI	ECTOR:		SCS - B.	Weglarz/M	I. Rivera			DATE START	1/27/2				1/30/2017
SAMF	LER:			oon - Start lic Hamme						CDC		ER READING	s
METH	IOD:		-	-Stem Aug				DATE	TIME		(ft btor)	CASING	STABILIZATION TIME
				8							()		
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:								
А	UGER		SA	AMPLE			SAMPLE D	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS						Methane		
DE	TIME	NO.	(in.)	(Ft.)	(/6")						(ppm)		
	9:52				18		SAND	(CONT.)			0	80.5	Fine Sand
81		S-6	21.6	81	28							<u>▼</u> -	The sand
					45							- 81.5	Coarse Sand
82	9:55			82	60		Gray fine to med	sand (moist t	o wet)				2" SCH 40 PVC
	10:13				5								NO. 10 SLOT SCREEN
83		S-7	20.4	83	9								L=2 FT
			20.1		6	83.2		LAY				83.5	PVC End Cap
84	10:14			84	6			ay (phosphatic	c)		↓ ↓	84.0	L=6"
							BOI	E = 84'					
	Notes:	btor = E	Depth to Below to easuring	p of riser									

S	C S 4041	Park	Οa		vd.,	Suite 100		S	PHASES I-VI LIQUID A SOUTHEAST	<u>ROJECT</u> ASSESSMENT M COUNTY LAND FHIA, FL		NG		REPORT OF	BORING : SE SHEET JOB NO. CHKD. BY	1 of :	<u>4</u> 15600.03	
DRILI	LER:					- Cruz, E)erel	k, an		HORIZ: ELEV.:	N125063 GROUND			454.97			notes for datun PVC (Riser) 199	
NSPE	ECTOR:			SCS -	C. D	Devitt				DATE START	2/20				DATE END			.45
AMP	LER:					on - Start c Hamme		69'					CDO	UNDWATE	DEADINCS			
4etf	IOD:					Stem Aug		(SA)		DATE	TIME	Τ		(ft btor)	CASING		TABILIZATION T	TIME
ASIN	IG SIZE:	4-1/-	4" I.I). & 8	-1/4'	" O.D.	OTH	IER:	CME 55 Drill Rig									
	UGER					MPLE			SAMPLE	DESCRIPTION				H&S	WELL	INSTAL	LLATION DIAGR	
DEPTH	TIME (min)	NC).	RE (in.		DEPTH (Ft.)		OWS 6")						Methane (ppm)			Stick-up :	= 3.0
	10	N	-	NA	-	. ,		٩S		SAND				0		88	3	
		1		1		1										12		
				1	1				Brown sand with som	ie organic mate	rial and s	od						
1					╈	2			2'								GROUT	(TYP
				1	1				-	VASTE						2		
						3]]			
																10		
						4			Sand intermixed with was plast	te (organics, 1 tic, wood)	netal, rag	gs, fa	abric,			10		
Ţ		Ш							,									
5						5								¥			10	
	15	Ц												0		38		
		Ц				6											2-INO SCH 40	
																	SOLI	
						7			-									
									Organics, plastic	s. Loosely com	pacted						F	
						8					-						10	
_					_				-									
_					_	9			-								12	
					_				-									
10			_		_	10								*				
	12				_									0		222		
_					+	11			-								10	
_			_	_	+				-									
-			_	-	+	12												
-					+				Dark organics, plastics	s, fibers. Loosel	y compact	ted.						
					+	13												
					+	14												
+				+	+	17			1									
15					╈	15			1					+				
	10					-								0	1			
						16]						1	130		
]									
						17]							120		
									Dark organics, fibers, plastic			odeı	rately					
						18			moist, mode	rately compact	ed.		[
						19												
		Ц														3		
20			,	¥		20	,	¥						↓		15		
	Notes:	btor MP :	= B = Me IPLE	elow easur DES	top ing p CRIF				observed cuttings from auger ne taken to drill each 5 foot in		poon coll	ecte	d.					

S					NE		5	<u>PR</u> PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT C	F BORING : SHEET JOB NO.	SB-23S 2 of 4 09215600.03
			npa	, FL 33	3610			LIT	HIA, FL		. = 0 10		CHKD. BY	
ORILI					RA - Cruz	, De	rek, an	d Ben	HORIZ: ELEV.:	GROUND	=196.4	596454.97	WELL MP: 1	See notes for datum Top of PVC (Riser) 199.45
	ECTOR:				C. Devitt				DATE START	2/20/2	2017		DATE END	2/21/2017
SAMP	LER:				poon - Sta ulic Hamı		l at 69'				GR	OUNDWAT	ER READING	is
METH	HOD:			HSA					DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
- ASIN	NG SIZE:	4-1/	4" 1 1	1 & 8-	1/4" O D	0	THER	CME 55 Drill Rig						1
		4-1/	т 1.1			0	TILK.					H&S		<u> </u>
	UGER			REC	SAMPLE DEPT	ни	BLOWS	SAMPLE I	DESCRIPTION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	NO).	(in.)			(/6")					(ppm)		
	15:11	N.	A	NA			NS	WAST	E (CONT.)			0		
					21									
					22	+								GROUT (TYP
\neg		\square		+		+	+							
\neg				+	23	+		Dark brown organ	ics moderately	moist				
				+	23	+		Dark brown brgan	, mouerately					
				+	24	+	+							
\dashv				+	24	+	+							
25	15:16			+	25	+	+							
	15:21					+						0		
\dashv	13.61			+	26	+	+							2-INCH
					20	+								SCH 40 PVC SOLID
				-	27		+							SOLID
				+	27	+		Black fine silty sand interm	irrod with fabri	o vlootio v				K
				+	28				ioist)	c, piastic, p	aper			
				-	20		+							
				+	29									Si 3
				-	29		+							
30	15:27			+	30	+								
30	15:27			-	30					·		0		
	15.52			-	31		+							
					51	+								
					32	+								
					52			Black fine silty sand interm	ived with fabri	c plastic p	aner			
				\top	33	+	+		noist)	-, piastic, p	aper			
				+		+								
				\top	34	+								
						+								
35	15:45				35	\uparrow						+		
	15:53					1						0		
					36	╈							1	
						╈		1					1	
					37	╈		1					1	
						1		Black fine silty sand interm	ixed with fabri	c, plastic, n	aper		1	
					38	\uparrow			10ist)	- ··· F			1	
						\uparrow							1	
					39	1		1					1	
						1								
40	16:03		,	+	40	\uparrow	+					+		
	- 5:00				10	\uparrow	,					· ·		
	Notes:	btor	= B	elow t	to water op of rise ng point	r								

S	CS							PHASES I-VI LIQUID			G	REPORT C	F BORING : S SHEET	3 of 4
	4041				/d., S 3610	uite 100))		COUNTY LANDF THIA, FL	ILL			JOB N0. CHKD. BY	09215600.03
	LER:		-	TIEF	RRA -	Cruz, D	erek,	and Ben	HORIZ: ELEV.:	GROUND	=196.4	596454.97		See notes for datum op of PVC (Riser) 199.45
	ECTOR:				C. De				DATE START	2/20/2	2017		DATE END	2/21/2017
SAMF	PLER:					n - Starte Hamme)'			GR	OUNDWAT	ER READING	S
METH	HOD:			HSA					DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1	/4" 1	.D. &	8-1/4	4" O.D.	OTHE	R: CME 55 Drill Rig				1		
	AUGER				SAM	PLE	-	SAMPLE	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH				RE		DEPTH	BLO					Methane		
DE	TIME	N		(in.	_	(Ft.)	(/6)				(ppm)		
	16:09	N	ÍA	NA	·		NS	WAS	TE (CONT.)			0		
				_		41		_						
							\square	_				\mid		
						42								GROUT (TYP)
						43		Black fine silty sand interm		ics, plastic,	paper,			
				T	Τ			wood, me	tal wire (moist)					
						44								
45	16:26					45						•		
	16:31				+		\vdash					0		
	10.31			+	+	16	\vdash	-						2-INCH
		\vdash		-	+	46	\vdash	-						SCH 40 PVC
		\vdash		+	+		\vdash							SOLID
-		\vdash		+	+	47	\vdash							
		\vdash		_	_			Black fine silty sand interm	ixed with organi tal wire (moist)	ics, plastic,	paper,			
		\vdash		_	_	48		_						10
				_	_			_						
		\vdash		_	+	49	\vdash	_						
				_	+		\vdash	_				\vdash		
50	16:41					50						+		
	16:46				\perp			_				0		
					\perp	51	\square	_						
						52								
								Black fine silty sand inter			vood,			
						53		metal, organic	s, tire shreds (m	oist)				
_1														
						54								
55	16:52				1	55								
	16:59				1							0		
				\uparrow	1	56						-		
				+	+	~~		1						
╡				+	+	57	\vdash	-						55 B
				+	+	57	\vdash	Black fine eilte send inter	mixed with	d plactic	anor			
		\vdash		-	+	50	\vdash	Black fine silty sand inter metal, or	mixed with wood ganics (moist)	a, piastic, p	aper,	\vdash		
		\vdash	_	+	+	58	\vdash							
		\vdash		-+	+		\vdash					\vdash		
		\vdash		+	+	59	\vdash					\vdash		
		\vdash		-+	+		\vdash	_				\vdash		
60	17:08	1	/	*	+	60	*	_				*		1953 (SP)
	N7 .													
	Notes:	bto	r = B	elow	to wato to point to p	friser								

S	Concerning of the second second		aks	Blvd.	NEE , Suite 100	and the second second	PHASES I-VI LIQUID AS SOUTHEAST CO			G	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	B-23S 4 of 4 09215600.03
DRILI	LER: ECTOR:		ΤI	ERR/	A - Cruz, D Devitt	erek, an	d Ben	HORIZ: ELEV.: DATE START	N125063 GROUND 2/20/2	=196.4	596454.97	WELL MP: T	See notes for datum op of PVC (Riser) 199.45
SAMP					oon - Start	ed at 69'		DATE START	2/20/2	2017		DATE END	2/21/2017
			Hy	drau	lic Hamme					1		ER READING	
METH	IOD:		HS	SA				DATE	TIME	DTW	(ft btor)	CASING	STABILIZATION TIME
CASIN	IG SIZE:	4-1/4	" I.D.	& 8-1	1/4" O.D.	OTHER:	CME 55 Drill Rig						
А	UGER			SA	MPLE		SAMPLE D	ESCRIPTION		1	H&S	WELL I	NSTALLATION DIAGRAM
DEPTH			F	REC	DEPTH	BLOWS					Methane		
DEI	TIME	NO.	+	in.)	(Ft.)	(/6")					(ppm)		
	17:13	NA	!	NA		NS	WASTE	E (CONT.)			0		
					61								
					62								GROUT (TYP)
			_		63		Black fine silty sand intermix paper, me	ed with organi etal (moist)	ics, wood, j	plastic,			e e
$ \rightarrow $			+										
			+		64								
		$\left \cdot \right $	+										
65	17:22		+		65						•		
	17:27			-							0		
			_		66								SCH 40 PVC 2-INCH
			_										SOLID
			+	-	67		Very hard drilling 65-69, Bl metal nie	ack fine silty s ces (moist)	and with lo	ots of			
			+	-				ces (moise)					
			-	-	68							68.0	
		$\left \right $	-	-									
	17:48	•	-	*	69	*	Start Split Spoo	n sampling at	69'				Bentonite
	8:47	$\frac{1}{2}$				46							Chips (typ.)
70		S-1	1	NR	70	25	Black fine silty sand mixed w	vith organics a	nd wood (1	moist)	0	70.0	
	•	ł				30							
	8:50		+		71	8	Black fine silty sand mixed w	with organics a	nd wood (i	moist			Coarse Sand
	9:07	ł			=0	8	Gray sand, fine			liioisej			
		S-2		20	72	8						72.0	
	•	ł			=0	18	Black fine silty sand mixed wi bags	th organics, w s (wet)	ood, glass,	plastic			
	9:09		+		73	25							2" SCH 40 PVC NO. 10 SLOT
	9:19	ł			74	22	Black fine silty sand mixed w	ith plantic be	- wood -	anni	\vdash		SCREEN
\neg		S-3		15	74	12 17		ith plastic bags per (moist)	s, wooa, or	games,			L=5 FT
75	9:22	ł			75	27							
13	9:22		+		/3	17						L.	義
	,,	t		_	76	25	Black fine silty sand mixed wi	th plastic glas	s, wood o	rganics			
	-	S-4		7		9		oist)	_,, 01	S			
	9:51	1			77	13						77.0	PVC End Cap L=6"
	-						77.5				•	77.5	
					PRE-PACKAGE TER NOT DEVH		BOE	= 77.5'					
	Notes:	DTW -	= Der	oth to	water								
		btor = MP = I	Belc Meas	ow top uring	p of riser	on							

S						NEE		S	PHASES I-VI LIQUID A			١G		F BORING : : SHEET	1 of <u>4</u>	
	4041			ks Bl , FL 3		Suite 10	υ			COUNTY LAND FHIA, FL	FILL			JOB NO. CHKD. BY	09215600	.03
DRIL	LER:		-			A - Cruz, I	Derel	k, an		HORIZ:	N125069	6.87 E59	7654.72	CHIND: D1	See notes	for datum
										ELEV.:	GROUND	= 186.1			Fop of PVC (Riser 188.82)
	ECTOR:					Devitt				DATE START	2/27/	2017		DATE END	3/1/2017	
SAMF	PLER:					oon - Start ic Hamme		: 58'				GRO	DUNDWATE	R READING	s	
AFTI	HOD:			-		-Stem Aug		SAL		DATE	TIME		(ft btor)	CASING		IZATION TIME
1611	100.			none	500 -	-Stelli Aug		JAJ		DAIL	TIML	DIW	(11 0101)	CASING	JIADIL	ALATION TIME
CASIN	NG SIZE:	4-1/	/4" I.I). & 8	-1/4	4" O.D.	OTH	IER:	CME 55 Drill Rig						+	
		T									1		1100		1	
	UGER					MPLE	1		SAMPLE	DESCRIPTION			H&S	WELL I	NSTALLATI	ON DIAGRAM
DEPTH			~	RE		DEPTH		OWS					Methane			Stick-up = 2.7
ā	TIME	N		(in	-	(Ft.)	-	6")					(ppm)		10 23	
	15:53	N	ÍA	NA	ł		1	1S	-	SAND			0			
						1			Brown sand with	sod, organic m	aterial.					
									1.5'							
										VASTE						20 0 U
-+			$\left \right $	-	+	2		-	ł				\vdash		38	GROUT (TYP)
		\square		_			<u> </u>		ł				⊨–			(
						3			ļ						10 A	\checkmark
									Black fine silty sand interr	nixed with fabr	ic, plastic,	paper.				
						4				moist)						
		\square	\square	+	+		\vdash		1							
		+	\vdash	+	-		-	-	ł				\vdash			
5	16:09		\mid	+		5			+			·	•			
	16:13		Ц					<u> </u>	ļ				0			
						6										2-INCH
]						12	SCH 40 PVC SOLID
						7			t							Count
_				-	+	7			+						4	
				_	_				Black fine silty sand interm	ixed with fabri ics, paper. (moi		plastic,				
						8			wood, organ	ies, paper. (mo	50					
									ļ						20	
						9										
									1						13 熱	
10	16.17					10			t				+			
10	16:17			-		10		-	+				·			
	16:20			-	_				ł				0			
						11			-							
									ļ							
						12										
									Black fine silty sand interm	nixed with fabri	c, rubber,	plastic,				
					1	13				ics, paper. (mo						
		\square		+	+	10			1							
		\vdash		+	+		-	-	ł				\vdash			
		\vdash	\vdash	+	\dashv	14	-	-	ł				\vdash			
			\square	+	-				ł				\vdash			
15	16:25		Ц			15			 				+		1	
	16:28								ļ				0		18	
Ī			ΙĪ		ſ	16										
				\top]							
		\square		+	\uparrow	17			1							
		+	\vdash	+	-	17	-	-	ł						13	
		\vdash	$\mid \mid$	-+	-		<u> </u>	<u> </u>	Black fine silty sand intermix wood, organics,			e shreds	'			
			\square	\downarrow		18			wood, organites,				$\mid \rightarrow \mid$			
									ļ							
[_		ΙĪ		ſ	19										
				\top]							
20	16.22		H	\pm	\dashv	20	1	t –	1				+			
20	16:33	+	*	*	\dashv	20	<u> </u>	₹	+				·		193	
	N-4	<u> </u>							ļ							
	Notes:	btor MP	r = B = Me	elow easur	top ing	water o of riser point IPTIONS -	base	d on (observed cuttings from auger	when no split s	poon colle	ected.				

	4041	Park	Oa ipa	ks Blv , FL 3	NEE d., Suite 10 3610	0	PHASES I-VI LIQUID A SOUTHEAST C LIT	OUNTY LANDF HIA, FL	ILL			DF BORING : S SHEET JOB N0. CHKD. BY	2 of 4 09215600.03
DRIL	LER:			TIER	RA - Cruz, I	Derek,	ind Ben	HORIZ: ELEV.:	N125069 GROUND		97654.72	WELL MP: T	See notes for datum op of PVC (Riser 188.82)
	ECTOR:				C. Devitt			DATE START	2/27/2			DATE END	
SAMF	LER:				Spoon - Star aulic Hamme		, '			GR	OUNDWAT	ER READING	S
METH	HOD:				w -Stem Aug)	DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
CACD	IC CITE					OTU	CMP 55 D.: II Di-						
CASI	NG SIZE:	4-1/4	F 1.1	J. & 8-	1/4" O.D.	UTHE	R: CME 55 Drill Rig						
	UGER		_		SAMPLE	B 1 B 1		DESCRIPTION			H&S	WELL I	ISTALLATION DIAGRAM
DEPTH	TIME	NO		REC (in.)		BLOV (/6					Methane (ppm)		
-	16:38	NA	-	NA		NS		E (CONT.)			0		
	10.50			1	21		WASI	E (CONT.)				-	
-					21		_					-	8 - B
-				+			_					-	
-		+	\neg	+	22	++	-				\vdash	-	GROUT (TYP)
\neg		++		+	20	++	Black fine silty sand inter	nixed with was	te- rubber	• tire	\vdash	-	
-+		++		+	23	++	shreds, plastic, or				\vdash	-	$\langle \langle \rangle$
-+		++		+		++	-				\vdash		
-+		++		+	24	++	-				\vdash		
25	16.44	++		+	25	++	-				\vdash	-	
25	16:44	+		+	25	+					▼ 0	-	
-+	16:49	++		+		++	-					-	2-INCH
		++		+	26	++	-					-	SCH 40 PVC
\neg		+		+	-	++	-						SOLID
\dashv		+		+	27	++		1.1.0.			\vdash	-	K
		++		+	-	++	Black fine silty sand intermi wood, m	xed withfabric, etal. (moist)	plastic, or	ganics,	\vdash		
		+		+	28	++	-				\vdash		100
			_				_						
				-	29	+	_						
				-		+	_					-	
30	17:08				30		Hard drilling 30'-32'		• • • • • • •		▼ 0	-	
	9:03		_	+			_					-	
			_	+	31		-					-	
			_	-			_					-	
			_	-	32		Black fine silty sand intern	nixed with wast	e- metal, fa	abric,		-	19
		++		+		++	wood, org	anics. (moist)			\vdash	-	
		+		+	33	++	-				\vdash	-	
		+	-	+	24	++	-				\vdash	-	
		+		+	34	++	-						
35	9:21	+		+	25	++	-					-	
JJ	9:21	+			35	+					0	-	
	10.30			+	36	++	1					1	
		$ \uparrow $		+		$\uparrow \uparrow$	1						
				+	37	$\uparrow \uparrow$	1					-	
				+	37	++	Black fine silty sand inter	mixed with play	stic. metal	tile			
\neg				+	38	++	fabric, wood. (wet			,			
		$ \uparrow $		+		$\uparrow \uparrow$	1						
				+	39	$\uparrow \uparrow$	1					1	
		$ \uparrow $		+		$\uparrow \uparrow$	1						
40	10:56	╞		Ţ	40	╎╷	1				+		
	10.00			*	ru						,		an and provid
ł	Notes:	btor	= B	elow	to water top of riser ng point	<u>ļ</u>	•						

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S						NEE Suite 100		<u>PR</u> PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT C	F BORING : S SHEET JOB NO.	SB-24D 3 of 4 09215600.03
				, FL	336	10		LIT	HIA, FL				CHKD. BY	
ORILI	LER:			TIE	RRA	A - Cruz, D	erek, a	nd Ben	HORIZ: ELEV.:	N1250696 GROUND :			WELL MP: T	See notes for datum Top of PVC (Riser 188.82)
NSPI	ECTOR:			SCS	- C. I	Devitt			DATE START	2/27/2			DATE END	
SAMF	PLER:					oon - Start		1						
METT	HOD:			-		ic Hamme Stem Aug			DATE	TIME		OUNDWAT / (ft btor)	ER READING CASING	STABILIZATION TIME
VIE I I	10D:			поі	10w -	-Stem Aug	er (nsa)		DATE	TIME	DIV	(IL DLOF)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1	/4"	I.D. 8	& 8-1	/4" 0.D.	OTHER	CME 55 Drill Rig						
Δ	UGER				SΔ	MPLE		SAMPLE Γ	DESCRIPTION			H&S	WELLI	NSTALLATION DIAGRAM
	IOULI			R	EC	DEPTH	BLOW					Methane	WEDD I	
DEPTH	TIME	Ν	0.	(ii	n.)	(Ft.)	(/6")					(ppm)		
	11:00	N	IA	Ν	А		NS	WAST	E (CONT.)			0		
						41								
						42		-						GROUT (TYP
\dashv				\vdash		42		1						
\neg		\vdash		\vdash			\vdash	Black fine silty sand intermi	xed with waste	- organics	metal	\vdash		
\neg		\vdash		\vdash		43	\vdash		astic. (wet)			\vdash		\checkmark
\dashv		\vdash		\vdash			\vdash	4						
		\vdash		\vdash		44	\vdash	4				\vdash		
		\vdash		\square			\vdash	4						
45	11:13					45	\vdash	┥				*		
	11:16							_				0		2-INCH SCH 40 PVC
						46	\square	4						SOLID
						47								-
								Black fine silty sand inermi	xed with metal	rubber, pl	astic,			
						48		wood	. (moist)					
						49		1						
						15		-						
50	11.00	┢				50		-				•		95 E3
50	11:32					50								
	11:43	\vdash						-				0		
_						51		-						12
_		\vdash						-						
_		┝				52		-						
_								Black fine silty sand inermit	xed with metal . (moist)	rubber, pl	astic,			
						53		_	(
								_						
				Ц		54	\square	4						
				Ц			\square	4						10
55	11:57					55						¥	55.0	J States and States
	12:02						\square	4				0	-	
						56		_						
								Black fine silty sand intermin		organics,	wood,			
_1					$ \top$	57		pl	astic.					
	12:14		,		,	58	+]						
	12:36						10	Start Split Spoo	on Sampling at	58'			1	
	12.00	1			ľ	59	13	1						
		S	-1		0	57	8	Black fine silty sand int	ermixed with v	vaste. (wet)			
60	12.20	ł			ŀ	60		1						
60	12:38	-		-		60	11	┫─				*		10.00 B351
	Notes:	<u> </u>		<u> </u>			L	ļ					I	
		DT	W =	Dep	th to	water								
						o of riser								
		мP	= M	easu	ring	point								

S	CS	EN	GII	NEE	R S	PHASES I-VI LIQUID A	<u>OJECT</u> SSESSMENT M	ONITORING		REPORT O	F BORING : S SHEET	4 of 4
	4041			, Suite 100)	SOUTHEAST C	OUNTY LANDF				JOB NO.	09215600.03
DRIL	LER:	lampa	, FL 336 TIERR/	A - Cruz, D	erek, and		HIA, FL HORIZ:	N1250696	.87 E5	97654.72	CHKD. BY	 See notes for datum
	ECTOR:		SCS - C.		,		ELEV.: DATE START	GROUND = 2/27/2	186.1			op of PVC (Riser 188.82)
	PLER:			oon - Start	ed at 58'		DATE START	2/2//2	017		DATE END	5/1/2017
			-	lic Hamme							ER READING	
MET	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-1	1/4" O.D.	OTHER:	CME 55 Drill Rig						
	AUGER		SA	MPLE		SAMPLE I	DESCRIPTION			H&S	WELL IN	ISTALLATION DIAGRAM
DEPTH		NO	REC	DEPTH	BLOWS					Methane		
G	TIME	NO.	(in.)	(Ft.)	(/6") 10					(ppm) 0		
-	12:54			61	10							GROUT (TYP)
		S-2	8	01	15	Black fine silty sand with	wood and plas	tic. (very w	et)			
	12:56			62	22							
	13:14				10							
			22	63	10		1.1				63.0	
		S-3	22		9	Black fine silty sand with v	voou, piastic, g	iass. (very v	vetj			
	13:15			64	14							Bentonite
	13:30				10	Black fine silty sand	d and wood. (v	erv wet)				Chips (typ.)
65		S-4	20	65	20							
					42	65.2 S	AND					
	13:32			66	63						66.0	Fine Sand
	13:59				14							
		S-5	23	67	19	Gray fine sand	, compacted. (v	vet)			67.0 67.3	Coarse Sand
-		·			26							2" SCH 40 PVC
-	14:01			68	20							NO. 10 SLOT SCREEN
	14:18			69	4	68.5	CLAY					L=2 FT
		S-6	24	07	4	Gray phoen	hatic clay. (wet	1			69.3	6" Cap
70	14:19			70	5		indie endyr (rree)		↓	69.8 70.0	
	- BOTTOM	I OF PVC	END CA	P AND PR	E-PACKEI	TER. LEACHATE HEAD CAUS D SCREEN SET ~1.3' INTO CLA NG MONSOON SUBMERSIBLE	AY.					
	Notes:	btor = E MP = M	easuring	p of riser								
				hammer								

S		Park	Oaks		Suite 100			PHASES I-VI LIQUID AS SOUTHEAST C			G	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	SB-25D 1 of 5 09215600.03
DRILI	LER:	Tum	-		A - Cruz, I)ere	k. an		HORIZ:	N124993	3.86 E5	97434.18	UUKD. DI	See notes for datum
									ELEV.:	GROUND	= 205.8			Fop of PVC (Riser) 208.83
	ECTOR:			SCS - C.					DATE START	3/2/2	017		DATE END	3/7/2017
SAMP	LER:				oon - Start		:78'				CD		ER READING	20
APTI	IOD.				lic Hamme		(4.2)		DATE	TIME				1
METH	10D:		F	10110W	-Stem Aug	er (F	ISAJ		DATE	TIME	DIW	/ (ft btor)	CASING	STABILIZATION TIME
ASIN	NG SIZE:	4-1	/4" I I	ገ & ጸ-1	L/4" O.D.	OTI	IFR.							
0/10/1	10 51212.	1 1/	1 1.1	J. a o 1	I/ I 0.D.	011	ILIC.	1				1		
	AUGER			SA	MPLE			SAMPLE D	ESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH				REC	DEPTH	BL	ows					Methane		Stick-up = 3.0
DEI	TIME	NC).	(in.)	(Ft.)	(/	6")					(ppm)		
	9:13	N.	A	NA		I	١C	S	AND			0		
				1	1		ı							
-+		++	+		1		1	Brown sar	nd and mulch					
		+	-+			┣	-	4				⊢		16
					2			2'						GROUT (TYP
Τ		ΙT	T					W	ASTE					
\neg		$\uparrow \uparrow$	+		2		1	1					1	
\dashv		++	+		3	-	-	4				\vdash		\checkmark
$ \rightarrow$			\square			<u> </u>	<u> </u>	Brown fine silty sand inter	mixed with	oodchin	s little	$\mid \mid \mid $		
					4	L		waste- metal, f			s, nuie			
			T					maste metal, i		,,]	
_	0.07	++	+		_		1	1						
5	9:28	++	\rightarrow		5	-		+				- -		
	9:34	\parallel						4				0		
					6									2-INCH
		$\uparrow\uparrow$						1					1	SCH 40 PVC SOLID
-+		+	+			-	1	1						SOUD
		+	_		7		<u> </u>	-						E
								Black fine silty sand interm						
					8			plastic, rubber tire shred	s, woodchips, o	rganics (d	lry)			11 12
				-				-						
		+	_	_	9		-	-						15 33
								_						12
10	9:39				10							+		S. 1
	9:43											0		
	7.45							-						
_		+	-		11			-						
								-						
					12									
								Black fine silty sand intermix	ed with large a	mounts of	waste-			
$\neg \uparrow$		$\uparrow \uparrow$	+		10			fabric, plastic, rubber, plasti	c bags, paper, 1 7 (dry)	netal, chu	nks of		1	
-+		+	+		13	\vdash	-	Ciay				\vdash		
-+		+	-+			┣	-	4				┝─┼──		
					14	L						\square		
15	9:52		T		15							+		
		+	+		10	-	1	+						
\rightarrow	9:56	+	+			⊢		1				0		
$ \downarrow$		\square	\square		16	<u> </u>	-	4				\vdash		
T			T		17									
		$\uparrow \uparrow$	+					Black fine silty sand intermix	ed with large a	mounts of	waste-			
-+		+	+			⊢	+	fabric, plastic, rubber, plastic	bags, metal ch			\vdash		10
\rightarrow		+	-+		18	<u> </u>	-	organ	ics (dry)			\vdash		1
Ţ		ΙT	Γ		19									
			+				1	1						
_			,			⊢	+	4				\vdash		
20	10:04	+	$ \rightarrow$	*	20		•					*		
Ī	Notes:	btor	= Be	epth to low top asuring	o of riser	_								

	FOR: ER: D: SIZE:	4-1/4 NO. NA	SC Sp Hy Ho " I.D.	S - C. lit Spe draul llow & 8-1	A - Cruz, I Devitt oon - Start lic Hamme -Stem Aug	ed at 78'		HORIZ: ELEV.: DATE START	N1249933 GROUND				See notes for datum
AUGE	R: D: SIZE: ER TIME	NO.	Sp Hy Ho " I.D.	lit Spo draul llow & 8-1	oon - Start lic Hamme							WELL MD. T.	op of PVC (Riser) 208.83
METHOD CASING S AUGE	D: SIZE: ER TIME	NO.	Hy Ho " I.D.	draul llow & 8-1	lic Hamme			DATE START	3/2/2			DATE END	
AUGE	SIZE: ER TIME	NO.	Ho " I.D. F	llow & 8-1		r							
AUGE	SIZE: ER TIME	NO.	" I.D. F	& 8-1	-stelli Aug	or (USA)		DATE	TIME		(ft btor)	ER READING CASING	S STABILIZATION TIME
AUGE E H T	ER	NO.	F			ег (пзА)		DATE	TIME	DIW	(IL DIOF)	CASING	STADILIZATION TIME
DEPTH	TIME			¢.A	L/4" O.D.	OTHER:							
DEPTH	TIME				MPLE		SAMDLED	ESCRIPTION			H&S	WELLIN	NSTALLATION DIAGRAM
				EC	DEPTH	BLOWS		LSCKII HON			Methane	WELLE II	VI TALLA HON DIAGNAM
1	0:23	NA		in.)	(Ft.)	(/6")					(ppm)		
		1	1	NA		NA	WAST	E (CONT.)			0		
					21			()					
			-				-						
			-		22								GROUT (TYP)
-+		\vdash	+	\square		\vdash	Black fine silty sand intern						
		\vdash	+		23	$\left \cdot \right $	waste- plastic, fabric, meta	al wire, rubber, tely moist)	metal chu	nks			\checkmark
		\square	+			$\left \right $	linouera						
		\square	+		24	$\left \right $	4						
			+			-	4						
25 10	0:43				25	\square					*		
10	0:50					\square	1				0		
					26								2-INCH
													SCH 40 PVC SOLID
					27								
							Black fine silty sand intern						*
					28		waste- plastic, fabric, meta (modera	al wire, rubber, tely moist)	metal chu	nks			
					10		Ì						
					29		1						
					29		1						15
			-				-				+		
	1:02				30				·				
1	1:06		_				-				0		
					31	$\left \cdot \right $	-						
						\vdash	-						
			_		32	\vdash	Duoum /hlash fina ailtu aand	into mairro d'unit	h langa ann	ounto			
			_			\square	Brown/black fine silty sand of waste- fabric, plastic bags,						
		\square	+		33	-	m	oist)					
			\perp			\square	4						
			_		34		4						
							1						
35 1	1:23				35						+		
13	3:20										0		
					36								
													8 C
					37								
			1	\square			Brown/black fine silty sand						
			Τ		38		of waste- fabric, plastic bags, m	rubber, metal v oist)	wire (mode	erately			
			\uparrow	Π			1						
			+	\square	39		1						
			+	Η	57		1						
10	2.20	+	+	┢┤	4.0	╞┼	1				+		
40 13	3:39		+	•	40	*	 		· · · ·		,		10204 685
Not	tes:		_			ļ	ļ						
.100		btor =	Belo	w top	water o of riser ng point								

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	4041	Par	k Oc	ıks Bl , FL 3	lvd., 3361		C		PHASES I-VI LIQUID AS SOUTHEAST CI LIT	OUNTY LANDF HIA, FL	ILL			F BORING : S SHEET JOB NO. CHKD. BY	3 of 5 09215600.03
DRIL	LER:			TIEI	RRA	- Cruz, E)erel	k, and	d Ben	HORIZ: ELEV.:	N124993 GROUND		97434.18	WELL MP: T	See notes for datum op of PVC (Riser) 208.83
	ECTOR:					Devitt				DATE START	3/2/2			DATE END	
AMF	LER:					on - Start ic Hamme		78'				CP	OUNDWAT	ER READING	s
METH	HOD:					Stem Aug		SA)		DATE	TIME		(ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1	./4"]	.D. &	8-1,	/4" 0.D.	OTH	IER:	1						
A	UGER				SAI	MPLE			SAMPLE D	DESCRIPTION			H&S	WELL IN	ISTALLATION DIAGRAM
DEPTH				RE		DEPTH		OWS					Methane		
B	TIME	-	0.	(in	-	(Ft.)		6")					(ppm)		
	13:44	P	NA.	NA	A		r	IS	WAST	E (CONT.)			0		
						41			Black fine silty sand interm	nixed with wast	e- nlastic l	hags			
									fabric, wood, n			Jugo,			
						42			Hard drilling at 42'						GROUT (TYP)
						43									
						44									
45	14:03					45							•		10
	14:12				Τ								0		
						46									2-INCH
						-									SCH 40 PVC SOLID
						47									
						.,			Black fine silty sand interm	ived with wast	- fabric n	lastic			*
						48			metal pieces, n			lastic,			
					+	40									
			-			49									
			\vdash		+	49									
-		-	+		+								+		
50	14:24		-		+	50							0		
	14:35				+								-		
			-		+	51									
			-		+										
			-	-	+	52									19 12
		-	-		+				Black fine silty sand intern plastic, fabric	nixed with was ;, rubber (mois		vire,			
		-	-		+	53									
					+										
-		┝	-	\vdash	+	54	\vdash						\vdash		
		-	+	\square	+		$\left \right $						+		
55	14:59	-	-		+	55	\vdash		Hard drilling at 55'						
-	15:55	┢	-		+		\vdash		-				0		
		-	-	\square	+	56	\vdash						\vdash		25
		-	-		+		$\left \right $						\vdash		
			-	\square	+	57	\vdash						⊨		
		-	-		+				Black fine silty sand intern		te- metal v	vire,			
		<u> </u>	-	\square	+	58	\square		plastic, fa	bric (moist)			\vdash		
		<u> </u>	-		+		\square						- -		
		<u> </u>	-	\square	+	59	\square						- -		
			-	\square	+		\square						$\mid \mid \mid$		
60	16:19		¥	¥	'	60		,			·		+		
	Notes:	DT	W =	Deptl	h to v	water	<u> </u>		<u> </u>						
		bto	r = E	elow	r top	of riser point									

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S	C S 4041	Park Oc	And the second second second	NEE ., Suite 100 510		PHASES I-VI LIQUID AS SOUTHEAST CO				REPORT C	OF BORING : S SHEET JOB NO. CHKD. BY	B-25D 4 of 5 09215600.03
DRIL	LER:		TIERR	A - Cruz, I)erek, an	d Ben		N1249933			WELL MD. T.	See notes for datum
INSPI	ECTOR:		SCS - C.	Devitt			ELEV.: DATE START	GROUND = 3/2/20		1	DATE END	op of PVC (Riser) 208.83 3/7/2017
SAMF	PLER:		Split Sp	oon - Start	ed at 78'							, ,
				lic Hamme							ER READING	
METH	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:							
		,								H&S		
	UGER	-	1	AMPLE	DI OUUG	1	ESCRIPTION				WELL IN	ISTALLATION DIAGRAM
DEPTH	TIME	NO.	REC (in.)	DEPTH (Ft.)	BLOWS (/6")					Methane		
		110.		(14)						(ppm) 0		
-+	16:25		NA		NC	WASTI	E (CONT.)			0		
				61		-						
		-				-						
				62								GROUT (TYP)
				63		Black fine silty sand intern			ire,			
		1				fabric, plasti	c, metal (moist)				e e
		1		64		1						
				64		1				\vdash		
					$\left \cdot \right $	1						
65	16:34			65						*		
	16:40	<u> </u>				4				0		
				66								SCH 40 PVC 2-INCH
]						SOLID
				67								
		1				Black fine silty sand intern	nived with was	te- metal w	ire			*
				68			ood (moist)	te metarw	110,			
_				00		-						
						-						
				69		-						
		-				-						
70	16:51			70						+		
	17:05									0		
				71								
				72		Black fine silty sand intern		te- metal w	ire,			
						wood, pla	astic (moist)					
		1		70		1						
				73		1				\vdash		
						1				\vdash	_	
				74	-	74' water				\vdash	74.0	
					- -	{				⊢	-	
75	17:18	<u> </u>		75	\square					↓		
	9:06									0		
				76								84 84 8
_ [Black fine silty sand intern	nixed with was	te- metal w	ire,			
			I	77			astic (moist)					
		1		İ		1						
\neg	0.1	1		70		1						
	9:15	<u> </u>		78		Start Split Spoo	on Sampling at	78'				
	9:35	┥			18	1				\vdash		
		S-1	18"	79	23	Black fine silty sand and sand	with glass and	plastic (ver	ry wet			
		╡			14				,	┣──		
80	9:38	<u> </u>		80	23					•		
	Notes:	btor = I		p of riser	_			_	_	_	_	
		MP = M	easuring	g point								

	i C S	E N	GII	NEE	DS		<u>OJECT</u>			REPORT (OF BORING : S		
_ C		A REAL PROPERTY.	the second second second	and the second second second second	and a second	PHASES I-VI LIQUID AS			3		SHEET	5 of 5	
	4041		aks Blvd. a, FL 336	., Suite 100	0	SOUTHEAST C	OUNTY LANDI HIA, FL	FILL			JOB NO. CHKD. BY	09215600.03	
DRII	LER:	rumpe		A - Cruz, I)erek an		HORIZ:	N124993	3 86 E	97434.18	UUKD. DI	See notes for	datum
					or only and	a ben	ELEV.:	GROUND	= 205.8		WELL MP: T	op of PVC (Rise	
INSF	ECTOR:		SCS - C.	Devitt			DATE START	3/2/2	017		DATE END	3/7/2017	
SAM	PLER:			oon - Start lic Hamme					GR	οιινοωάτ	ER READING	22	
MET	HOD:		-	-Stem Aug			DATE	TIME		/ (ft btor)	CASING	STABILIZA	TION TIME
				8						()			
CASI	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:								
	AUGER		SA	AMPLE		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATION I	DIAGRAM
			REC	DEPTH	BLOWS					Methane			
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)			
	9:59				13					0			
81		1		81	15						1	G!	ROUT (TYP)
		S-2	19"	01		Black fine silty sand and s	and with woo	d, glass, pla	stic				
		1			14						-		
82	10:00			82	13						-		
	10:19	4			10						-		
83		S-3	4"	83	9	Black fine silty sand and sand	with glass and	olastic (verv	wet)		83.0		
		0.0			9				,				Bentonite
84	10:21	T		84	16								Chips (typ.)
	10:25				10	Black fine silty sand with pla	stic bags, woo	d, glass (vei	ry wet)		-		
-	10.23	1				84.7'							
85		S-4	24"	85	21	S	AND						
		4			47						-		
86	10:39			86	74						86.0		
	11:00				7								Fine Sand
87				87	16	Gray fine s	and (very wet)				87.0	C C	oarse Sand
		S-5	20"		29								
		1									-		' SCH 40 PVC NO. 10 SLOT
88	11:02			88	10						-		SCREEN
	11:29	4			3	88.3'					-	10	L=2 FT
89		S-6	28"	89	5	C	LAY				-	P	VC End Cap
					5	Crow oilt	y clay (wet)				89.0		L=6"
90	11:30			90	5	Gray Site	y ciay (wei)			↓ _	89.5		
						BO	E = 90'				•		

Notes:

Notes: - ADVANCED AUGERS TO 90' TO SET PIEZOMETER. LEACHATE HEAD CAUSED SAND TO FILL AUGER ANULUS. - BOTTOM OF PVC END CAP AND PRE-PACKED SCREEN SET ~1.2' INTO CLAY. - DEVELOPED PIEZOMETER ON 3/7/2017 USING MONSOON PUMP. REMOVED ~10 GALLONS. - THIS BORING SHOWED LARGER AMOUNTS OF WASTE COMPARED TO OTHER BORINGS AND ALSO CONTAINED AN UNUSUALLY LARGE AMOUNT OF METAL WIRE THROUGHOUT THE ENTIRE DEPTH. - UPPER 20' OF BORING IN RECENTLY PLACED WASTE - SINCE INSTALLATION OF THIS PIEZOMETER, FILL HAS BEEN ADDED IN THE SURROUDING AREA. ELEVATIONS AND STICKUP HAVE CHANGED FROM THESE NUMBERS.

Notes:

DTW = Depth to water btor = Below top of riser MP = Measuring point

S	C S 4041	Park C	Daks		Suite 100			PHASES I-VI LIQUID AS SOUTHEAST C			Ĵ		F BORING : S SHEET JOB NO. CHKD. BY	B-28D 1 of 5 0921560 	0.04
DRILI	LER:		Т	IERR/	A - Cruz, I	Dere	k, an	d Ben	HORIZ: ELEV.:	N125004 GROUND		96725.34	WELL MD. T		es for datum
INSPE	ECTOR:		S	CS - C.	Devitt				DATE START	4/26/2		99	DATE END		(Riser) 208.62 7
SAMF	LER:		S	plit Sp	oon - Start	ed a	:78'								
					lic Hamme								ER READING		
METH	HOD:		Н	ollow	-Stem Aug	er (F	ISA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABI	ILIZATION TIME
CASIN	NG SIZE:	4-1/4	1" I D) & 8_1	1/4" O.D.	ОТІ	IFR.							 	
CASI	AG SIZE.		T 1.L	. œ 0-1	1/4 O.D.	011	ILIX.							L	
	AUGER			SA	MPLE	-		SAMPLE D	ESCRIPTION			H&S	WELL IN	ISTALLAT	TION DIAGRAM
DEPTH				REC	DEPTH		ows					Methane			Stick-up = 2.93
ä	TIME	NO		(in.)	(Ft.)		6")					(ppm)		1933	3
	10:51	NA		NA		1	٩C	S.	AND			0		88 S	2
					1										
T			ſ					Brown sar	nd and mulch						
			T		2	1		2'							GROUT (TYP)
-+		++	+				1		ASTE					31	
-+		++	+			\vdash		· · · · · ·				\vdash			
-+		++	+		3	-		4				┣─┤──			K
		++					<u> </u>	Brown fine silty sand inter	rmixed with t	ire chinc	metal	$\mid \mid \mid =$			2
					4			pieces, glass, plastic. (dry							
Ι											,				100
5	11:10				5]				+			1
~			+				1	Temporary high methane re	eading. Crew m	oved away	y from	12.000			3
-	11:14	++	╉				-	hole until level lowered.				12,000			2-INCH
_		++	+	+	6	-		4				\vdash			SCH 40 PVC
		\downarrow		+			<u> </u>	4				\vdash			SOLID
					7										5
														*	T
					8			Black fine silty sand interm		e- metal, pl	lastic,				
								fabric, pa	per. (moist)						
			+			-		-						<u> </u>	
			_		9		-	-							
		++						-							
10	11:41				10							*			8
	11:45											0			
					11										
		$\uparrow \uparrow$	╈		12		1	1						38	
			+		12									18	
		++	+	+		\vdash	-	Black fine silty sand intermi metal	xed with waste . (moist)	e- piastic, p	aper,	\vdash			
		++	+	+	13	-	-	-	-			┣─┤──			
_			+				_	4							
					14			-				$\mid \mid \mid =$			
15	11:55				15							↓			
	11:59											0			
			╈		16		1	1				-		13	
		++	╉		10		1	1							
		++	+	+		-	+	1				\vdash			
\dashv		++	+		17		-	{				\vdash		6	
			\perp					Black fine silty sand intermi			aper,	\vdash			3
					18			metal, fabric, organ	ics, tire whips.	(moist)					
Ţ		ΙT	ſ											23	
			Τ		19]							
			╈					1							
		╈	╉	+		\vdash	+	1							
20	12:20	+ *	+	*	20	-	۲	+				•		108	9
	N - 4	<u> </u>						ļ							
	Notes:	btor MP =	= Bel Mea	low top suring	water o of riser point IPTIONS -	base	d on	observed cuttings from auger	when no split s	poon colle	cted.				

ి					NEE		PHASES I-VI LIQUID AS			G	REPORT C	F BORING : S SHEET	2 of 5
	4041				vd., Suite 10 3610	0	SOUTHEAST C	OUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.04
RILI	LER:	Tu			RA - Cruz,	Derek, ar		HORIZ:	N1250040	0.00 E5	96725.34	CIIKD. DI	See notes for datum
								ELEV.:	GROUND	= 205.6			op of PVC (Riser) 208.62
	ECTOR:				C. Devitt			DATE START	4/26/2	2017		DATE END	5/1/2017
AMP	LER:				Spoon - Star aulic Hamm					GR	OUNDWAT	ER READING	S
1ETH	HOD:			-	w -Stem Au			DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1	/4" I	.D. &	8-1/4" O.D.	OTHER:							
	UGER				SAMPLE		SAMPLET	DESCRIPTION		•	H&S	WELL	NSTALLATION DIAGRAM
	UGEN			RE		BLOWS		JESCRIF I ION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	Ν	0.	(in.		(/6")					(ppm)		
_		N	IA	NA		NA					0		
	12:23		-	1		1.	WAST	E (CONT.)					
_				_	21	+ $-$	_						
					22								GROUT (TYP)
Τ													
1					23		Black fine silty sand intern			hips,			
+				+	23		plastic, fabric,	organics. (moi	st)				~
\dashv		\vdash		_	-	+	-				\vdash		
\rightarrow		\vdash		-	24	++	-				\vdash		
							1						
25	12:36				25						+		
T	12:39]				0		
\dashv				+	26		1				Ĩ	1	2-INCH
\dashv		\vdash	—	+	26	+	4						SCH 40 PVC
\rightarrow		⊢		+		+	4				\vdash		SOLID
		_		\perp	27		4				\vdash		
							Black fine silty sand inter			tic,			F
					28		organics, woo	od, metal. (mois	t)				
							-						
-				-	29		-						
_							_						
30	13:06				30						*		
	14:06										0		
					31								
]						
					32		-						
					32		-						
-							Black fine silty sand interr fabric, organic	nixed with was s, plastic. (moi		vire,			
_				_	33								
\dashv			Ц				4						
					34								
T				Γ									
35	14:35				35]				•		
				+			1				0		
+	14:39	-	\vdash	+		+	4				0		
+		-	\vdash	+	36		-				\vdash		
-+		_	Ц	-+		+	4				\vdash		
					37								
ſ	_						Black fine silty sand interr			vire,			
					38			s, plastic. (moi]	
+			H	+	30		1						
\rightarrow		-	\vdash	+		+ +	-				\vdash		
-+			\square	+	39	+	4				\vdash		
							1						
40	15:12		•	+	40	↓					¥		
Τ													
	Notes:					+	<u> </u>					1	
					to water								
					top of riser Iring point								

S	C S 4041					EE uite 100		5	PHASES I-VI LIQUID AS SOUTHEAST C	OUNTY LANDF		3	REPORT C	F BORING : S SHEET JOB NO.	SB-28D 3 of 5 09215600.04
ORILI	LER:	Ta	-		3610 RRA -) Cruz, D)ere	k, and		HIA, FL HORIZ:	N1250040			CHKD. BY	See notes for datum
NSPI	ECTOR:			SCS -	C. De	vitt				ELEV.: DATE START	GROUND = 4/26/2		9	WELL MP: T DATE END	op of PVC (Riser) 208.62
_	PLER:					n - Start	ed at	:78'			-, = -, =			DATE END	5/1/2017
				Hydr	aulic	Hamme	r							ER READING	
METH	HOD:			Hollo	w -St	em Aug	er (H	ISA)		DATE	TIME	DTW	(ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1	/4" I	.D. &	8-1/4	4" O.D.	OTH	IER:							
		<u> </u>											H&S		
	UGER	-		REG	SAMI	PLE DEPTH	рт	ows	SAMPLE D	ESCRIPTION			Methane	WELL I	NSTALLATION DIAGRAM
DEPTH	TIME	N	Э.	(in.		(Ft.)		6")					(ppm)		
	15:16	N	A	NA	-			٧S	14/ A C'T'				0		5.5
	13.10			1		41		1		E (CONT.)			1		
				-		41			Perched water at 41'						
-		\vdash					-								
\dashv		\vdash		+	+	42	-								GROUT (TYI
\neg		\vdash		+	+										
-		\vdash		+		43			Black fine silty sand with wa	aste- metal wir wet)	e, plastic, fa	abric.			
		\square		+					C.						
				_	-	44									
				_											
45	15:56					45							*		
	16:01												0		
						46									2-INCH SCH 40 PV0
															SCH 40 PVC SOLID
_1						47									
									Black fine silty sand interm	xed with waste	- fplastic, 1	metal			e e
						48			wire, orga	nics. (moist)					
						49									
50	16:43					50							•		
	8:45												0		
						51									
						-									1
						52									
						52			Black fine silty sand intermize	ed with waste	motal wir	o tiro			
				+		53	\square			anics (moist)		.,			
				+		55	\square								
				+		E4	\vdash								
		\vdash		+		54	\vdash								
55	9:11	\vdash	\vdash	+	+	55	\square						•		
55	9:11					55							0		
	7.10			+	+	E.C	\square								
		⊢	\vdash	+		56	\vdash								
\neg		-		+	+		\vdash								
-		\vdash	\vdash	+		57	\vdash			1					
\dashv		-	\vdash	+			$\left \right $		Black fine silty sand intermiz chips, org	ked with waste anics (moist)	• metal wir	e, tire	\vdash		1
		-	\vdash	+		58	$\left - \right $		· · · · · · · · · · · · · · · · · · ·	9			$ \vdash $		
		-	$\left \right $	+			$\left - \right $								
		-	\vdash	_	-	59	\square								
		-		_	-		\square								
60	9:40	<u> </u>	*	+	+	60		,					+		
	Nat														
	Notes:	bto	r = B	elow	to wa top of	friser									

S				NEE		PHASES I-VI LIQUID AS			3	REPORT C	F BORING : S SHEET	4 of 5
	4041		aks Blvd. 1, FL 336	., Suite 100 510	0	SOUTHEAST C	OUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.04
RIL	LER:	rampe		A - Cruz, E)erek, an		HORIZ:	N1250040				See notes for datum
NSPI	ECTOR:		SCS - C.	Devitt			ELEV.: DATE START	GROUND 4/26/2		9		Top of PVC (Riser) 208.62 5/1/2017
AMF	PLER:			oon - Start								
AFTI	HOD:		-	lic Hamme -Stem Aug			DATE	TIME		OUNDWAT ' (ft btor)	ER READING CASING	S STABILIZATION TIME
4611	10D.		11011010	-stelli Aug	ei (IISA)		DATE	TIME	DIW		CASING	STADILIZATION TIME
CASII	NG SIZE:	4-1/4"	I.D. & 8-	1/4" O.D.	OTHER:							
	UGER		SA	AMPLE		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM
DEPTH		NO.	REC	DEPTH (Ft.)	BLOWS					Methane		
ō	TIME	NU.	(in.)	(rt.)	(/6")					(ppm) 0		
_	9:50		NA	(1	NC	WAST	E (CONT.)			-		
				61								
				62		-						GROUT (TYP
				02		-						GROOT(TTP
				63		Black fine silty sand interm			s, tire			
\neg		1		50		chips, plastic	c, metal. (moist)				<pre>K</pre>
				64		1						
65	10:36			65						•		
	10:42									0		
				66								2-INCH
												SCH 40 PVC SOLID
				67		_						
						Black fine silty sand intermix			metal,			E E
				68		plastic, wood chi	ps, organics. (n	ioist)				
						-						
				69		-						
						-						
70	11:15			70						¥		
_	11:19					-				0		
_				71		-						
_						-						
				72		-						
_						Black fine silty sand interm plastic, org	ixed with wast anics. (moist)	e- metal pi	eces,			感影
_				73		-						
_				74		-						
				74		1						
75	11:47			75		1						
	11:57	İ		-						0		
				76]						
						Black fine silty sand interm		e- metal pi	eces,			
				77		plastic, org	anics. (moist)					
	12:40			78	+							
	13:14	ļ			37	Start Split Spoo	on Sampling at	/8.				
		S-1	9"	79	54	Cond intormired with	ato motol w	alace w	od			
		ļ			20	Sand intermixed with wa	iste- inetal wire	, giass, wo	uu.			
80	13:18			80	30					↓		
	Notes:	btor = H	Depth to Below to easuring	p of riser								

										1		
S	CS	EN	GI	NEE	RS		<u>OJECT</u>				F BORING : S	
		and the second se	A REAL PROPERTY AND	, Suite 100		PHASES I-VI LIQUID AS SOUTHEAST CO			i		SHEET JOB NO.	5 of 5 09215600.04
			a, FL 336				HIA, FL	ILL			CHKD. BY	
DRIL	LER:		TIERR	A - Cruz, D)erek, an		HORIZ:	N125004				See notes for datum
INSP	ECTOR:		SCS - C.	Devitt			ELEV.: DATE START	GROUND 4/26/2		9	DATE END	op of PVC (Riser) 208.62 5/1/2017
SAM	PLER:		Split Sp	oon - Start	ed at 78'							-1 1 -
			-	lic Hamme							ER READING	
MET	HOD:		Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. & 8-1	1/4" O.D.	OTHER:							
										H&S		
	AUGER		REC	AMPLE DEPTH	BLOWS	SAMPLE D	ESCRIPTION			Methane	WELL II	NSTALLATION DIAGRAM
DEPTH	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)		
	13:41		. ,		18	WASTI	E (CONT.)			0	80.0	
81	15.11	t		81	16							GROUT (TYP)
01		S-2	19"	01		Black fine silty sand and san		netal wire,	glass,			
		1			19	. pl	astic				_	
82	13:43	──		82	25						▼ −	
	14:07	ł			7						-	
83		S-3	4"	83	7	Black fine silty sand and san		bags, glass	(very		83.0	77 77
	<u> </u>	ļ			9		vet)					Bentonite Chips (typ.)
84	14:08			84	9							Cimps (typ.)
	14:25	Γ	Γ	Γ	39	Black fine silty sand with plas	stic bags, wood	, glass (ver	y wet)	[]	ĺ	
85		İ		85	95	84.5'						
-		S-4	24"		162	S/	AND				85.5	
86	14:39	†		86	235	•					0	Fine Sand
00				00								e e
H	15:12	ł			18	•					86.5	Coarse Sand
87		S-5	20"	87	50	Gray fine sa	and (very wet)				87.0	K K
\vdash		ł			78							2" SCH 40 PVC
88	15:19		 	88	103							NO. 10 SLOT SCREEN
	15:45	ļ			14	-						L=2 FT
89		S-6	24"	89	10	89.0'					89.0	PVC End Cap
		00	2.		12		LAY				89.5	1-C"
90	15:46			90	8	Gray silty	y clay (wet)			*		
			-			BOF	E = 90'					
	- BOTTOM	4 OF PVC	CEND CA	P AND PRI	E-PACKED	TER. LEACHATE HEAD CAUSE D SCREEN SET AT TOP OF CLAY GRUNDFOS SUBMERSIBLE PU	Υ.			IS.		

Notes:

DTW = Depth to water btor = Below top of riser MP = Measuring point

		Park	Oaks pa, F	5 Blvd., EL 336	Suite 100 10			PHASES I-VI LIQUID AS SOUTHEAST CO LITI	OUNTY LANDF HIA, FL	ILL			F BORING : S SHEET JOB N0. CHKD. BY	1 of 5 09215600.04 RBC	
DRIL	LER:		1	ΓIERR/	A - Cruz, E)erel	k, an	d Ben	HORIZ: ELEV.:	N124986 GROUND			WELL MP: T	See notes for dat op of PVC (Riser) 2	
INSPI	ECTOR:		5	SCS - C.	Devitt				DATE START	5/2/2			DATE END		07100
SAMF	PLER:				oon - Start		78'				an	0.0000000000000000000000000000000000000			
APP	100				lic Hamme		C 4 2		DATE	TIME			ER READING	1	
MEII	HOD:		ſ	10110W ·	-Stem Aug	er (H	SAJ		DATE	TIME	DIW	/ (ft btor)	CASING	STABILIZATIO	N IIME
CASI	NG SIZE:	4-1/	′4" I.I	D. & 8-1	L/4" O.D.	OTH	IER:	CME-55 Drill Rig							
		T								1		110.0		_	
	AUGER		- T		MPLE				ESCRIPTION			H&S	WELL IN	NSTALLATION DIA	
DEPTH		NO		REC (in.)	DEPTH (Ft.)		OWS 6")					Methane		Stick-L	up = 3.6
	TIME	-	-		(11.)				AND			(ppm)		100 000	
		N.	A	NA		P	IC	3.	AND			0			
		++	\downarrow	\square	1			Droum cand with livel - 1-1	(wacto)	ia mat'	al (da)	\square			
								Brown sand with little debris	(wastej, orgai	ne materia	ai (ury)				
T		$ \top$	Τ		2			2.0'						S	SOIL
			\uparrow						ASTE						-
\neg		++	+	+	2	1		1							
\neg		++	+	+	3	-	-	1				\vdash			
-		++	+	+		-	-	Black fine silty sand intermi	xed with wast	e- plastic, 1	paper,				
		++	\dashv	+	4	<u> </u>			oric. (moist)						
		\parallel				_	_	4							
5	15				5			L				+			
			Τ]				0			
		$\uparrow \uparrow$	╡		6			1						2-	INCH
		++	+		U			1						SCH	40 PVC
\neg		+	+	+	L	-	-	4				\vdash		SO	OLID
		++	+		7	-	-	-				\vdash			
		$\downarrow \downarrow$				_		Black fine silty sand intermi		e- plastic, p	paper,	\mid			
					8			metal, fal	oric. (moist)						
					9									20 23	
								-						1.2	
					10			-				+		55 EX	
10	15			_	10			+							
							-	-				0			
					11			-							
								-							
					12										
								Black fine silty sand intermi	xed with wast	e- plastic, p	paper,				
			T		13				oric. (moist)						
								1							
		+	+	+	14			1							
		+	+	+	14	-	-	1				\vdash			
		+	+	+		-	-	-							
15	13	+	+	+	15	-	-	+				*		SY CE	
		\downarrow				_		4				0			
					16										
						L									
			T		17										
			\uparrow					Black fine silty sand intermi	xed with wast	- nlactic ·	naper				
\dashv		+	+	+	40	-	-		oric. (moist)	- μιαστιτ, Ι	բարել,	\vdash		19	
		+	+	+	18	-	-	-				\vdash			
		+	+	+		-	-	-				\vdash			
		\downarrow		\square	19	_	<u> </u>	4				\mid			
20	9	•	·	¥	20		ł					+			
			1					Γ					'	Laster Determined	
	Notes:	btor MP = SAM	= Be = Mea IPLE	asuring DESCR	p of riser point IPTIONS -			observed cuttings from auger and 60-75' represent time to (

S		Park	Oal		NEE I., Suite 10 610	A DECEMBER OF THE OWNER.	PHASES I-VI LIQUID AS SOUTHEAST C			G		F BORING : S SHEET JOB NO. CHKD. BY	B-29D 2 of 5 09215600.04 RBC
DRILI	LER:	-	-		A - Cruz, I	Derek, an		HORIZ:	N124986				See notes for datum
INSPE	ECTOR:		5	SCS - C	. Devitt			ELEV.: DATE START	GROUND 5/2/2		.2	DATE END	op of PVC (Riser) 207.86
SAMP	LER:		5	Split Sp	poon - Start	ed at 78'							-,-,
				Hydraulic Hammer Hollow -Stem Auger (HSA)								ER READING	
METH	HOD:		1	Hollow	/ -Stem Aug	er (HSA)		DATE	TIME	DTW	/ (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1/	4" I.	D. & 8-	·1/4" 0.D.	OTHER:	CME-55 Drill Rig						
				0			CAMPLE	FOOD IDTION			H&S		
	UGER		Т	REC	AMPLE DEPTH	BLOWS	1	DESCRIPTION			Methane	WELL II	ISTALLATION DIAGRAM
DEPTH	TIME	NO		(in.)	(Ft.)	(/6")					(ppm)		_
		NA	ł	NA		NA	WAST	E (CONT.)			0		
					21		Hard drilling 21'	2 (0011)					
				+			iaiu ur innig 21						
		++	+	+			-						
-+		++	+	+	22		1				\vdash		SOIL
-+		++	+	+		$\left - \right $	1				\vdash		
-+		++	+	+	23	$\left - \right $	Black fine silty sand interm paper, m	ixed with waste etal. (moist)	e- plastic, f	abric,	\vdash		l K
		++	+	+		$\left - \right $	-						
_		$\left \right $	+	_	24	-	-						
		$\left \cdot \right $	+	_			4						
25	30	\square	\rightarrow		25								
		\square					4				0		
		\square			26		4						2-INCH SCH 40 PVC
													SOLID
					27								
							Black fine silty sand interm		e- plastic, f	abric,			E E
					28		paper, m	etal. (moist)					
					29								20
30	20				30						+		
	8:20										0		
					31								25 B
		\square			1		1						
			1		32		1						
		$\uparrow \uparrow$					Black fine silty sand interm	ixed with wast	- plastic f	abric			
		$\uparrow \uparrow$	+	+	33		paper, metal. Hard						
		$\uparrow \uparrow$	1		55		1						
			\uparrow	-	34		1						
		$\uparrow \uparrow$	+		54		1						
35	8:26	+	\uparrow		35		1				•		
55	8:29	$\uparrow \uparrow$	\neg				 				0		
	0.27	$\uparrow \uparrow$	+		36		1						
		$\uparrow \uparrow$	+	+			1						
		+	+	+	0.5		-				\vdash		
		+	+	+	37		Diada Gua attra data	and and the second second second second second second second second second second second second second second s			\vdash		25 B
\dashv		+	+	+			Black fine silty sand interm organics, f	ixed with waste abric. (moist)	e- piastic, p	aper,	\vdash		
-+		+	+	_	38	$\left - \right $	4	-			\vdash		
		+	+			$\left \right $	4				\vdash		
		+	+		39	$\left - \right $	4				\vdash		
		+	+	+		$\left \right $	-				\vdash		
40	8:45	\vdash	+	•	40	•	 		· · · ·		*		
	Notes	<u> </u>			<u> </u>	<u> </u>							153
	Notes:	btor MOP	= Be = M	elow to leasuri	o water op of riser ing point r drilling th	rough 30'	and 60-75' represent time to	complete each	5' section.				

S	C S 4041		aks	Blvd.	NEE , Suite 100	and the second	PHASES I-VI LIQUID AS SOUTHEAST C			3	REPORT C	F BORING : S SHEET JOB NO. CHKD. BY	B-29D 3 of 5 09215600.04 RBC
DRIL	LER:				A - Cruz, I)erek, ar		HORIZ:	N124986				See notes for datum
INSPI	ECTOR:		SC	S - C.	Devitt			ELEV.: DATE START	GROUND 5/2/2		2	WELL MP: T DATE END	op of PVC (Riser) 207.86
	PLER:				oon - Start	ed at 78'			- / /	-		DITLELIND	5/1/2017
					lic Hamme					GR	OUNDWAT	ER READING	S
METH	HOD:		Но	llow	-Stem Aug	er (HSA)		DATE	TIME	DTW	' (ft btor)	CASING	STABILIZATION TIME
CASIN	NG SIZE:	4-1/4	'ום	& 8-1	I/4" O D	OTHER	CME-55 Drill Rig						
0/10/1	TO SIZE.	1 1/1	1.D.	aoı	L/ 1 0.D.	OTHER.	CIAL 35 DAILING				110.0		
	UGER		—		MPLE	1	1	DESCRIPTION			H&S	WELL I	ISTALLATION DIAGRAM
DEPTH		NO.		REC in.)	DEPTH (Ft.)	BLOWS (/6")					Methane		
	TIME	NO.	-	ni.j NA	(rt.)	NS					(ppm) 0		
_	8:50	NA	+ '	INA		IND	WAST	E (CONT.)			0		
			_		41		-						
							Die de Guereiller ernel internet						
					42		Black fine silty sand interm paper, fabric,	organics. (mois		netal,			SOIL
T								-					
			1		43		Hard drilling at 43'						
			1										
		++	+	+	4.4		1						
-+		++	+	+	44		1						
-+		++	+	+		-	4				+		
45	9:20	+	+		45	-	 						
	9:25	\vdash	_			-	4				0		
		\square	1		46		4						2-INCH SCH 40 PVC
							1						SOLID
					47								
							Black fine silty sand interm	ixed with wast	e- metal, pl	lastic.			*
					48			abric. (moist)					
			1		10								
			+		10		1						
			+		49		-						
_			+-	+			-				•		
50	9:35		+		50								
	9:38		_				-				0		
			_		51		Hard drilling at 51'						68 Et
					52								
_1					53		Black fine silty sand interm	ixed with wast	e- metal, pl	lastic,	$ $		25
								abric. (moist)					
			1	\square	54		1						
			\uparrow	\square	51		1						
55	10.05		+				1				•		
22	10:05		+		55		 						
	10:09	++	+	+		\vdash	4				0		
		++	+	+	56	-	4						
		++	+	+		-	4						
			_	\square	57	\square	4						
		\vdash	1			\square	Black fine silty sand interm		e- metal, pl	lastic,			13
					58		organics, f	abric. (moist)					
T					59								
				\square]						
60	10:29	↓	1	¥ I	60		1				•		
50	10.27		+		00		 						
	Notes:	I	-		L	I	ļ				1	I	nasi nat
		btor = MP = M	Belo Veas	ow top uring			and 60-75' represent time to						

S	CS	EI	N	GI	NEE	R S	<u>PR</u> PHASES I-VI LIQUID AS	<u>OJECT</u> SESSMENT MO	NITORIN	.	REPORT C	F BORING : S SHEET	B-29D 4 of 5
		Park	Oal		., Suite 100	and the second	SOUTHEAST C	OUNTY LANDF		3		JOB NO.	09215600.04
DRIL	LER:	Ian	-		A - Cruz, E	erek, and		HIA, FL HORIZ:	N124986	6.0 E59	7614.4	CHKD. BY	RBC See notes for datum
INCD	ECTOR:				Devitt			ELEV.: DATE START	GROUND 5/2/2		22		op of PVC (Riser) 207.86
	PLER:				oon - Start	ed at 78'		DATE START	3/2/2	017		DATE END	5/4/2017
0/11/11	DER.				ilic Hamme					GR	OUNDWAT	ER READING	S
METH	HOD:		ł	Hollow	-Stem Aug	er (HSA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/	4" I I	D & 8-	1/4" O D	OTHER	CME-55 Drill Rig						
		,				0111LIG	-				H&S		
	UGER		Т	S/ REC	AMPLE DEPTH	BLOWS	SAMPLE D	ESCRIPTION				WELL II	NSTALLATION DIAGRAM
DEPTH	TIME	NO		(in.)	(Ft.)	(/6")					Methane (ppm)		
		NA	-	NA		NC	14/ A CTT	CONT)			0		
			+		61		WASI	E (CONT.)			1		
_			+		61								
_			+										
-		\vdash	+	_	62	\vdash					\vdash		SOIL
-		\vdash	+	_			Black fine eilty and interest	vad with most	- nlactio -	1200-	\vdash		
-		\vdash	+	_	63	-	Black fine silty sand intermi metal, org	anics. (moist)	. μιαδιίζ, β	aper,	\vdash		
-		$\left - \right $	+	_	<u> </u>						\vdash		
-			_		64	- -					- -		
65	10	\square			65						+		SCH 40 PVC
		\square									0		2-INCH
		\square			66								SOLID L=77.0 FT
					67								-
							Black fine silty sand intermi	xed with waste	e- plastic, p	oaper,			
					68		metal, org	anics. (moist)					
					69								
70	4				70						•		10 BE
											0		
					71								
					72							72.0	19
							Black fine silty sand intermi	xed with wast	- nlastic r	naner			
					73			anics. (moist)	pidode) p	uper,			Bentonite Chip
		\square	╡				1						Bentonite Chip
		\square	+		74							74.0	
		\square	+		, :							/4.0	
75	15	↓		+	75								
	13		+		, ,						0		
			+		76								
			+		70		Black fine silty sand intermi	ved with wast	- nlaetie -	apor			
			+		77			anics. (moist)	. μιαstit, β	aper,			
			+		//							77.0	Coarse Sand
	0		+								\vdash		· 〉
	8	-	+		78	05	Start split spoo	on sampling at	78				薑
	12:47	ł				25					\vdash		巖
		S-1	1	4"	79	38	Soil and waste- w	ood, plastic, or	ganics		\vdash		靈
		┦				65							巖
80	12:53		+		80	100					*		1999 (Maria)
	Notos	I											
	Notes:	btor MP =	= Be = Me	elow to asuring	o water p of riser g point drilling th	rough 30'	and 60-75' represent time to	complete each	5' section.				

C	SCS ENGINEERS				DC	PROJECT				REPORT OF BORING : SB-29D		
ి	A REAL PROPERTY AND	Contraction of the local distribution of the	State of the later	, Suite 100	an to Bender	PHASES I-VI LIQUID AS			3		SHEET	5 of 5
	4041		ікѕ віvа. , FL 336		J	SOUTHEAST CO	UUNTY LANDF HIA, FL	ILL			JOB NO. CHKD. BY	09215600.04 RBC
DRILI	ER:			A - Cruz, E	erek, and		HORIZ:	N124986	6.0 E59			See notes for datum
INCDE	CTOR:		SCS - C.	Dovitt			ELEV.: DATE START	GROUND 5/2/2		2		op of PVC (Riser) 207.86
SAMP				oon - Start	ed at 78'		DATE START	3/2/2	017		DATE END	5/4/2017
JAMI	LLIN.			lic Hamme					GR	OUNDWAT	ER READING	S
METH	OD:		Hollow	-Stem Aug	er (HSA)	DATE TIME DTW			/ (ft btor)	CASING	STABILIZATION TIME	
CASIN	IG SIZE:	4-1/4	I.D. & 8-	1/4" U.D.	OTHER:	CME-55 Drill Rig						
	UGER		SA	AMPLE	1	SAMPLE D	DESCRIPTION			H&S	WELL IN	STALLATION DIAGRAM
DEPTH			REC	DEPTH	BLOWS					Methane		
DE	TIME	NO.	(in.)	(Ft.)	(/6")					(ppm)	80.0	SI
\vdash	13:11	ļ			13	WASTI	E (CONT.)			0		蕃
81		S-2	23	81	37	Soil and waste- tire chips, n	netal wire, woo	od, plastic. ((wet)			
		02	20		26	81.5'						
82	13:14			82	31	S	AND					
	13:37				15							蠜
83		Ì		83	13							Coarse Sand
05		S-3	16	0.5								
\vdash		}			21							、業
84	13:40			84	46							2" SCH 40 PVC
\vdash	14:04	ļ			8	Gray fine	e sand (wet)					NO. 10 SLOT
85		S-4	24	85	20					+		SCREEN
					24					0		L=10 FT
86	14:06			86	29							
	14:32				1							
87	11101	ł		87		86.7'					07.0	PVC End Cap
07		S-5	24	07		C	LAY				87.0	L=6"
\vdash		}			3	White silty clay (phosphatic)					87.5	
88	14:33			88	4		E = 88'	-		+		1.17
	BOTTON	1 OF PVC	END CA	P AND PR	E-PACKEI	AY AND SET PIEZOMETER.) SCREEN SET ~0.8' INTO CLA GRUNDFOS SUBMERSIBLE PI		D ∼7 GALL	ONS.			
I	Notes:	btor = E	Depth to Below to easuring	p of riser								

SCS ENGINEE		De		PROJECT				REPORT OF BORING : SB-30							
2								PHASES I-VI LIQUID ASSESSMENT MONITORING					SHEET	1 of <u>4</u>	
	4041				, Suite 10	0		SOUTHEAST CO		FILL		JOB N0. 09215600.04			0.04
ORIL	LFR	Tamp			10 A - Cruz, I	Jerol	an		HA, FL HORIZ:	N124985	05 5500		CHKD. BY	RBC See notes	for datum
			11	LINK/	а - ст uZ, I	Jerek,	anc			GROUND			WELL MP: 7		Riser) 189.53
NSPI	ECTOR:		SC	S - C.	Devitt			Γ	DATE START	5/1/	2017			5/2/2017	
SAMF	PLER:				oon - Starl		58'				0.00		DDFADING		
1571	HOD:		-		lic Hamme		42	F	DATE	TIME			R READING CASING		IZATION TIME
vi E I I	100:		r10	WOIIOW	-Stem Aug	er (HS	АJ	F	DAIE	TIME	DIW	(ft btor)	CASING	STABI	LIZATION TIME
CASI	NG SIZE:	4-1/4"	I.D. 8	8-1/	4" O.D.	OTH	ER:	CME 55 Drill Rig			1			+	
									DOOD 107	<u> </u>	I	H&S			ON DATE:
	UGER			SA REC	MPLE DEPTH	BLO	WC	SAMPLE D	ESCRIPTION			Methane	WELL	INSTALLATI	ON DIAGRAM Stick-up = 3.7
DEPTH	TIME	NO.		in.)	(Ft.)	BL0						(ppm)			566K up = 3.7
		NO.	-	NA	()	N	-	۶۵	AND			(ppm) 0		5.2	
-	13:30		+			,	-								
\dashv		\vdash	+	$\left \right $	1	\vdash	_	Brown sand with s	od, organic m	aterial.		- -			
								1.5'						13	
					2			WA	ASTE						SOIL
1															
			T		3			Ţ							
\dashv			+		5		-	Plaak fin11	und with the	w w / 1	alacti				«
		\vdash	+	+		\vdash	_	Black fine silty sand intermiz organi	xed with wast cs. (dry)	.e- metal, j	piastic,				
		\vdash	+	$\left \right $	4	$\left \right $	_		,			$\left - \right $			
		\square	+				_	ļ							
5	13:46	\square			5							+			
	13:48											0		58	
			Γ		6									15	2-INCH
			1					t							SCH 40 PVC SOLID
			+		7		-	ł							JOLID
\dashv		\vdash	+	+	7	\vdash	_							E	P
		\vdash	+	$\left \right $		\vdash	_	Black fine silty sand intermin fabric, orga	xed with wast inics. (moist)	te- metal, j	plastic,	$\left - \right $		15	
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		\square	\perp			\square								1	
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		\vdash	+	$\left \right $		$\left \right $	_	1							
		\square	+		12			ļ							
		\square				\square		Black fine silty sand intermine		te- metal, j	plastic,			1.1	
					13			organics, fa	ibric. (moist)						
	_]		[]			
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			\uparrow			$ \uparrow $		t							
15	14.51		+		1 -										
15	14:51		+		15	+	-	+			· — —				
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		\vdash	+	$\left \right $	16	\vdash	_							3	
		\square				\square									
					17										
T						ΙT		Black fine silty sand intermize	xed with wast	e- plastic,	paper,]			
					18				nics. (moist)						
			+					t						58	
			+	+			-	ł							
\dashv		\vdash	+	$\left \right $	19	\vdash	_	ł							
		\vdash	_	\square				ļ				$\mid \mid \mid \mid \mid$			
20	15:01	↓		↓ _	20	↓						+			
_ [L		_]											
	Notes:		•			•		·							
					water										
					o of riser point										
		MP = I	vieas												

S	SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100 Tampa, FL 33610			5	PHASES I-VI LIQUID ASSESSMENT MONITORING SOUTHEAST COUNTY LANDFILL LITHIA, FL				REPORT C	REPORT OF BORING : SB-30 SHEET 2 of 4 JOB NO. 09215600.04 CHKD. BY RBC					
DRIL	LER:					- Cruz, E)erel	k, an		HORIZ:	N124985				See notes for datum
INSPI	ECTOR:			SCS -	C. D	evitt				ELEV.: DATE START	GROUND 5/1/2		/8	DATE END	op of PVC (Riser) 189.53 5/2/2017
SAMF	LER:					on - Start		58'							
						: Hamme				D 4 000		1		ER READING	
METH	HOD:			Hollo	ow -S	Stem Aug	er (H	SA)		DATE	TIME	DTV	/ (ft btor)	CASING	STABILIZATION TIME
CASI	NG SIZE:	4-1/-	4" I.I). & 8	-1/4"	0.D.	OTH	IER:	CME 55 Drill Rig						
	UGER	1			C 4 1				CAMPLET	FCCDIDTION		1	H&S		INSTALLATION DIAGRAM
	UGER			RE	1	1PLE DEPTH	BL	OWS	SAMPLE L	ESCRIPTION			Methane	WELL II	NSTALLATION DIAGRAM
DEPTH	TIME	NC).	(in.		(Ft.)		6")					(ppm)		
	15:05	NA	A	NA	A		N	٩S	WAST	E (CONT.)			0		83
				1		21		1		(court)					
						21									
_		+	_	-											
-		+		+	+	22			•						SOIL
-+		┢┼┤		+	+				Black fine silty sand interm	ixed with wast	e-fahric pl	lastic	\vdash		
\dashv		$\left \right $		+	+	23	⊢			shreds. (moist			\vdash		$\langle \langle \rangle$
\dashv		$\left \right $		+	+		\vdash		4			\vdash			
		\vdash		+	+	24									
		$\left \right $		+	+								\vdash		
25	15:11	$\left \right $			+	25							+		
	15:14	$\mid \mid$			\downarrow				1				0		
		\square			\perp	26							\mid		2-INCH SCH 40 PVC
															SOLID
						27									
									Black fine silty sand intern			reds,			4
						28			plastic, organi	cs, fabric. (moi	st)				
						29									
30	15:17					30							•		
	15:20												0		
						31									
						32									
									Black fine silty sand intern	nixed with was	te- plastic.	tire			
				\uparrow	╈	33			shreds, organi						
				\uparrow	╈				1						
				+	+	34		-	1						
				+	+	51	⊢		1						
35	15:29			+	+	35	⊢		1						
	15:32			+	╈	55							0		
	10.04			+	╉	36			1						
				+	╉	50			1						
				+	+	37			1						
		+		+	+	37			Black fine silty sand intermix	ad with wast-	plactic a-	ania			
\dashv		\vdash		+	+	20	\vdash			ed with waste- oric. (moist)	μιαστις, υΓ	gamuCS,			10
		+		+	+	38	⊢		1				\vdash		
		┢┼┤		+	+	20	-		1						
		┢┼┤		+	+	39	-		1						
40	4	+		+	+		\vdash		1						
40	15:56	+ *	'	*	+	40		/					*		1958 BB
	Notes:	<u> </u>							<u> </u>						
		btor	= B		top	vater of riser ooint									

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S	SCS ENGINEERS 4041 Park Oaks Blvd., Suite 100			and the second second	PHASES I-VI LIQUID ASSESSMENT MONITORING SOUTHEAST COUNTY LANDFILL				REPORT C	REPORT OF BORING : SB-30 SHEET 3 of 4 JOB NO. 09215600.04				
		Ta			336				HIA, FL				CHKD. BY	RBC
DRIL	LER:			TIE	ERRA	A - Cruz, E	erek, an	d Ben	HORIZ: ELEV.:	N124985 GROUND			WELL MP: T	See notes for datum op of PVC (Riser) 189.53
INSPI	ECTOR:			SCS	5 - C.	Devitt			DATE START	5/1/2			DATE END	
SAMF	PLER:					oon - Start ic Hamme					CD	OUNDMAT		G
METH	10D-			-		Stem Aug			DATE	TIME		/ (ft btor)	ER READING CASING	S STABILIZATION TIME
	100.			1101	1011	otem nug			DITL	TIME	DIV		Gribiitta	
CASII	NG SIZE:	4-1	/4" 1	.D. 8	& 8-1	/4" 0.D.	OTHER:	CME 55 Drill Rig						
	UGER				S۸	MPLE		SAMPLET	DESCRIPTION			H&S	WELLIN	NSTALLATION DIAGRAM
	TOULK	-		R	EC	DEPTH	BLOWS	SAMI LE L	LISCKII HON			Methane	WELL II	13 TALLA HON DIAGRAM
DEPTH	TIME	Ν	0.	(i	n.)	(Ft.)	(/6")					(ppm)		
	15:59	N	ΙA	N	IA		NS	WAST	E (CONT.)			0		
						41								
						11								た 単
		-				42								SOIL
-		-					\vdash	Diada Guaratha da si				\vdash		
		_				43	\square	Black fine silty sand interr shreds, org	nixed with was anics. (moist)	ue- plastic,	are	\vdash		K
		_							,					
						44								
Τ														
45	16:08					45						•		
	16:10											0		2-INCH
	10.10	1				16		1				Ī		SCH 40 PVC SOLID
		╞		\square	\square	46		1				\vdash		SOLID
		-		_										K
-+		-		_		47								
				_				Black fine silty sand interr	nixed with was anics. (moist)	te- plastic,	tire			
		_				48		311603, 012	anics. (moist)					15 55
						49								
														18 H
50	16:14					50						↓		
	16:18											0		
						51								「「「「「」」
		F												
		\mathbf{T}				52								1
		\mathbf{T}				32					,			
		\vdash						Black fine silty sand intern plastic, metal,	organics. (moi		eas,			18 K
		\vdash	\vdash	\square		53		1				\vdash		
		\vdash						4						
		\vdash		\square		54	- -	4				\vdash		
		\vdash												
55	16:38					55						•	55.0	Sec. S
	16:42	\square										0		
						56								
								Black fine silty sand intern			eds,			Coarse Sand
						57		plastic, organi	cs, metal. (moi	st)				
	17:05		,		,	58		1					58.0	
	8:11	Ľ					14	Start Split Spoo	on Sampling at	58'				展
	5.11	1				59	14	1						巖
		S	-1	1	3	57		 Black fine silty sand interm metal wire. 	ixed with wast and ash. (wet)	e- plastic, v	vood,			巖
		1					28	inetai wire,	unu usii. (wel)					巖
60	8:15	-				60	103					•	60.0	
	Notes	L					<u> </u>	<u> </u>						
	Notes:	bto	r = B	elov	w top	water o of riser point								

S	CS ENGINEERS				RS	<u>PROJECT</u> PHASES I-VI LIQUID ASSESSMENT MONITORING				REPORT OF BORING : SB-30 SHEET 4 of 4			
	A DESCRIPTION OF A DESC	and the second second second second second second second second second second second second second second second	A REAL PROPERTY AND A REAL	, Suite 100		PHASES I-VI LIQUID AS SOUTHEAST C			i.		JOB NO.	4 of 4 09215600.43	
		Tampa	1, FL 336				HIA, FL				CHKD. BY	RBC	
DRIL	LER:		TIERR	A - Cruz, D	erek, an	d Ben	HORIZ: ELEV.:	N1249850 GROUND			WELL MP: T	See notes for datum op of PVC (Riser) 189.53	
-	ECTOR:		SCS - C.				DATE START	5/1/2	017		DATE END		
SAM	PLER:			oon - Start lic Hamme					GR	OUNDWAT	ER READING	S	
MET	HOD:		-	-Stem Aug			DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIME	
CASI	NG SIZE:	4-1/4"	I.D. & 8-1	1/4" O.D.	OTHER:	CME 55 Drill Rig				1			
	AUGER			AMPLE		SAMPLE I	DESCRIPTION			H&S	WELL I	NSTALLATION DIAGRAM	
DEPTH	TIME	NO.	REC (in.)	DEPTH (Ft.)	BLOWS (/6")					Methane			
	8:44	110.	(111.)	(10)	73	Black fine silty sand with v	vaste- wood a	nd plastic. (very	(ppm) 0	60.0		
	0.11	1		61	29	61'	wet)				60.0	Coarse Sand	
		S-2	23	01	35		AND						
	8:50	1		62	37							「「「「「」」	
	9:09			02	5							巖	
	9:09	1		63	12							2" SCH 40 PVC	
		S-3	23	03	30							2" SCH 40 PVC NO. 10 SLOT SCREEN L=10 FT	
	9:11	1		64	43							L=10 FT	
	9:11			04	43 5							置	
65	9:24	1		65		Gray fine sand	, compacted. (v	vet)				憲	
65		S-4	24	65	11 12							薯	
	0.26	1											
	9:26			66	16							臺	
	9:47	ł		(7	3								
		S-5	26	67	2							葦	
	0.40	ł		(0)	3							6" Cap	
	9:48			68	5		CLAY hatic clay. (wet				68.0		
	- BOTTOM	4 OF PVC	END CA	P AND PR	E-PACKE	TER. LEACHATE HEAD CAUSI D SCREEN SET ~1.0' INTO CLA UNDFOS SUBMERSIBLE PUMI	AY.			JS.			
	Notes:	btor = E MP = M	easuring	p of riser	on								
		WH = W	Veight of	hammer									

Appendix G Piezometer Surveys

PIEZOMETER NUMBER	POINT NUMBER	NORTHING	EASTING	TOP OF PVC ELEVATION	GROUND ELEVATION
SB15	17053	1249797.0	598218.8	184.44	181.7
SB16	17054	1249796.9	598315.2	183.60	180.4
SB17	17057	1250512.1	598111.1	185.47	182.4
SB18	17058	1250501.7	598219.3	182.71	179.8
SB19	17062	1250693.0	597033.6	203.06	200.4
SB20	17061	1250837.8	597321.7	192.86	190.0
SB21	17065	1250827.3	596433.6	194.30	191.3
SB22	17066	1250913.8	596382.9	193.05	190.0
SB23	17069	1250642.4	596444.3	199.66	196.5

×198.8

SB22

SB21

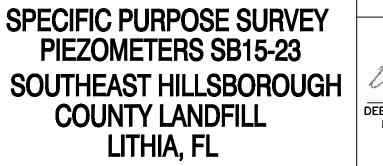
\$823

NOTES: 1.) North, the grid, and the coordinates shown hereon are referenced West Zone Fla. State Plane Coordinate System, NAD83 1990 adjustment.



2.) Elevations are to National Geodetic Vertical Datum 1929.

SCALE 1"=200

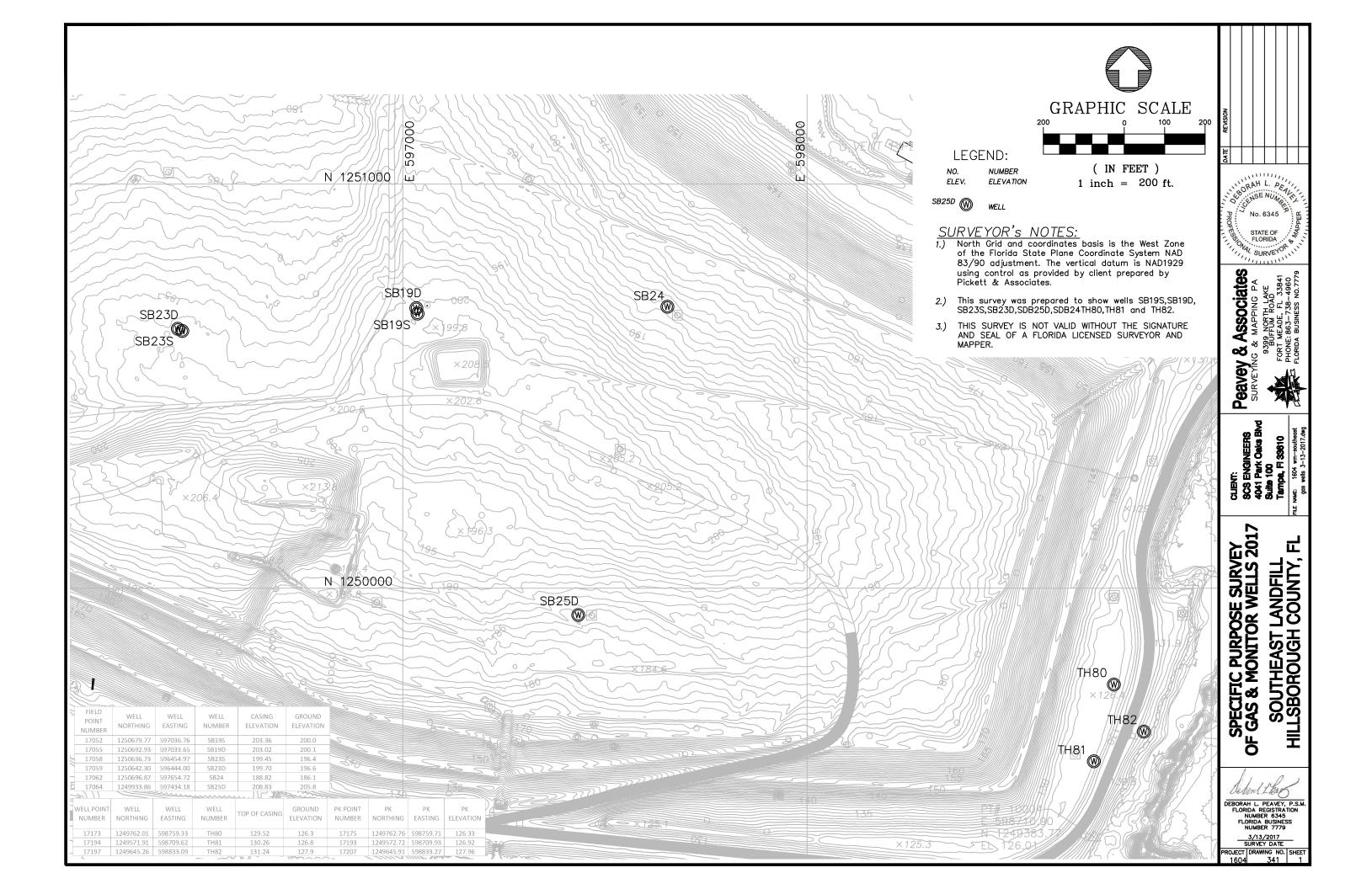


DEBORAH L. PEAVEY, P.S.M. FLORIDA REGISTRATION NUMBER 6345 FLORIDA BUSINESS NUMBER 7779

° Contractions		
	° × 9998 × 208	
×200.6		SB17
ő ×2138		
	× 1963 of 200	
		X
2.5	National Conduits Vertical Datum 1020	



	REV]	SIONS		
NO.	BY	DATE	DESCRI	PTION
1603		borough cou	Field Book:	PROJECT NO. 1603
piez	cometer	2-23-2017	. WM1	DRAWING NO. 337
		/2017 Y DATE	Party Chief: SP	SHEET NO. 1



Appendix H Liquid Elevation and Head-Over-Liner Information

	Appendix H Water Level Data - Liquid Assessment Monitoring Phases I, II, III, IV, and VI - Southeast County Landfill										
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)				
		6/9/2016	61.3		127.1		8.8				
		6/10/2016	61.4		127.0		8.7				
		6/16/2016			127.2		8.9				
		6/21/2016			127.3		9.0				
		6/22/2016	61.5		126.9		8.6				
		6/28/2016	61.2		127.2		8.9				
		7/13/2016			127.3		9.0				
		7/29/2016			126.6		8.3				
		8/5/2016			127.7		9.3				
		8/12/2016			128.0		9.6 9.8				
		8/19/2016			128.1		9.8 9.8				
		8/26/2016 9/2/2016			128.2 128.4		10.1				
		9/9/2016			128.4		10.1				
		9/16/2016			128.6		10.3				
		9/23/2016			120.0		10.9				
		9/30/2016			129.6		11.3				
		10/11/2016			129.8		11.5				
		10/14/2016			129.8		11.5				
		10/21/2016			130.6		12.3				
		10/28/2016			130.4		12.1				
		11/4/2016			130.4		12.1				
		11/11/2016			130.2		11.9				
		11/18/2016			129.9		11.6				
		11/25/2016			129.6		11.3				
		12/2/2016			130.2		11.9				
11	SB-01	12/9/2016			129.7		11.4				
		12/16/2016			129.7		11.4				
		12/23/2016			129.7		11.4				
		12/30/2016			129.7		11.4				
		1/6/2017	58.6		129.8		11.5				
		1/13/2017	59.2		129.2		10.9				
		1/20/2017 1/27/2017	58.8 59.3		129.6 129.1		11.3 10.8				
		2/3/2017	59.6		129.1		10.5				
		2/3/2017 2/10/2017			120.0		10.3				
		2/17/2017	59.6		128.8		10.5				
		2/24/2017	59.3		120.0		10.8				
		3/3/2017	59.9		128.5		10.2				
		3/10/2017	59.5		128.9		10.6				
		3/17/2017	60.0		128.4		10.1				
		3/24/2017	59.9	1	128.5		10.2				
		3/31/2017	59.5		128.9		10.6				
		4/7/2017	59.8		128.6		10.3				
		4/13/2017	59.9		128.5		10.2				
		4/21/2017	59.9		128.5		10.2				
		4/28/2017	60.0		128.4		10.1				
		5/5/2017	59.6		128.8		10.5				
		5/12/2017	59.8		128.6		10.3				
		5/19/2017	60.2		128.2		9.8				
		5/26/2017	60.3		128.1		9.8				
		6/2/2017	60.2		128.2		9.8				
	1			I	-		-				

Phase Boring # Date (ft tpvc) PVC (NGVD) ² (NGVD) 6/9/2016 54.5 187.62 133.1 6/11/2016 56.5 131.2 133.0 6/16/2016 54.6 133.0 6/21/2016 56.2 131.4 6/22/2016 55.4 132.2 6/28/2016 56.1 131.5 7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0	op of Clay Elev (NGVD) ² 117.9	Liquid Depth Over Clay (ft)
Phase Boring # Date (ft tpvc) PVC (NGVD) ² (NGVD) 6/9/2016 54.5 187.62 133.1 6/11/2016 56.5 131.2 133.0 6/16/2016 54.6 133.0 6/21/2016 56.2 131.4 6/22/2016 55.4 132.2 6/28/2016 56.1 131.5 7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0	(NGVD) ²	Clay (ft)
6/9/2016 54.5 187.62 133.1 6/11/2016 56.5 131.2 6/16/2016 54.6 133.0 6/21/2016 56.2 131.4 6/22/2016 55.4 132.2 6/28/2016 56.1 131.5 7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		- 1 ()
6/16/2016 54.6 133.0 6/21/2016 56.2 131.4 6/22/2016 55.4 132.2 6/28/2016 56.1 131.5 7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		15.2
6/21/201656.2131.46/22/201655.4132.26/28/201656.1131.57/13/201654.8132.97/29/201654.9132.88/5/201656.3131.38/12/201655.6132.0		13.3
6/22/2016 55.4 132.2 6/28/2016 56.1 131.5 7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		15.1
6/28/201656.1131.57/13/201654.8132.97/29/201654.9132.88/5/201656.3131.38/12/201655.6132.0		13.5
7/13/2016 54.8 132.9 7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		14.3
7/29/2016 54.9 132.8 8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		13.6
8/5/2016 56.3 131.3 8/12/2016 55.6 132.0		15.0 14.9
8/12/2016 55.6 132.0		14.9
		14.1
8/19/2016 55.8 131.8		13.9
8/26/2016 55.8 131.8		13.9
9/2/2016 55.7 131.9		14.0
9/9/2016 55.7 131.9		14.0
9/16/2016 55.5 132.1		14.2
9/23/2016 54.9 132.7		14.8
9/30/2016 54.6 133.0		15.1
10/11/2016 54.3 133.3		15.4
10/14/2016 54.5 133.1		15.2
10/21/2016 54.0 133.6		15.7 14.2
10/28/2016 55.5 132.1 11/4/2016 54.0 133.6		14.2
11/1/2016 54.4 133.2		15.3
11/18/2016 54.5 133.1		15.2
11/25/2016 54.6 133.0		15.1
12/2/2016 54.9 132.7		14.8
II SB-02 12/9/2016 55.0 132.6		14.7
12/16/2016 55.0 132.6		14.7
12/23/2016 55.0 132.6		14.7
12/30/2016 55.1 132.5		14.6
1/6/2017 55.0 132.6		14.7
1/13/2017 55.4 132.2		14.3
1/20/2017 54.9 132.7 1/27/2017 55.4 132.2		14.8 14.3
2/3/2017 55.6 132.0		14.3
2/10/2017 55.6 132.0		14.1
2/17/2017 55.6 132.0		14.1
2/24/2017 55.4 132.2		14.3
3/3/2017 55.9 131.7		13.8
3/10/2017 55.8 131.8		13.9
3/17/2017 56.2 131.4		13.5
3/24/2017 56.2 131.4		13.5
3/31/2017 55.8 131.8		13.9
4/7/2017 56.4 131.2		13.3
4/13/2017 56.5 131.1 4/21/2017 56.4 131.2		13.2 13.3
4/21/2017 56.4 131.2 4/28/2017 56.7 130.9		13.3
5/5/2017 56.4 131.2		13.3
5/12/2017 56.7 130.9		13.0
5/19/2017 56.9 130.7		12.8
5/26/2017 57.1 130.5		12.6
6/2/2017 57.0 130.6		12.7
		-

		w	ater Level Dat	Appendix H a - Liquid Ass	essment Moni	toring	
		Pha	ses I, II, III, IV,	and VI - Sout	heast County I	andfill	
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)
	Bornig //	6/10/2016	51.7	185.73	134.0	117.4	16.63
		6/16/2016	59.7	100.70	126.1	117.4	8.68
		6/21/2016	59.8		126.0		8.58
		6/22/2016	59.9		125.9		8.48
		6/28/2016	58.0		123.3		10.38
		7/13/2016	56.2		127.6		12.18
		7/29/2016	59.7		126.1		8.68
		8/5/2016	56.2		120.1		12.13
		8/12/2016	56.0		129.7		12.33
		8/19/2016	56.2		129.5		12.13
		8/26/2016	55.8		129.9		12.53
		9/2/2016	56.0		129.7		12.33
		9/9/2016	55.9		129.8		12.33
		9/16/2016	55.0		129.0		13.33
		9/23/2016	55.0		130.7		13.33
		9/30/2016	55.0		130.7		13.33
		10/11/2016	55.0		130.7		13.33
		10/11/2016	55.0		130.7		13.33
		10/21/2016	54.8		130.7		13.53
		10/28/2016	54.7		130.9		13.63
			54.9				13.43
		11/4/2016			130.8		14.03
		11/11/2016	54.3 54.3		131.4 131.4		14.03
		11/18/2016					14.03
	SB-3	11/25/2016	54.3		131.4		14.03
		12/2/2016	<u>54.2</u> 54.9		131.5 130.8		13.43
11		12/9/2016 12/16/2016	<u> </u>		130.8		13.43
		12/23/2016	54.8		130.9		13.43
		12/23/2016	<u> </u>		130.6		13.43
		1/6/2017	55.1		130.8		13.43
		1/13/2017	54.4		131.3		13.93 13.33
		1/20/2017	55.0 55.2		130.7 130.5		13.13
		1/27/2017 2/3/2017			130.5		12.93
							12.93
		2/10/2017	55.7		130.0 129.9		12.53
		2/17/2017	55.8 55.5		129.9		12.55
		2/24/2017 3/3/2017	55.9		129.8		12.8
		3/10/2017	55.8		129.0		12.43
		3/17/2017	56.1		129.9		12.33
		3/24/2017	56.1		129.0		12.23
		3/24/2017 3/31/2017	55.9		129.6		12.23
		4/7/2017	55.9		129.8		12.43
		4/13/2017	56.2		129.4		12.03
		4/13/2017 4/21/2017	56.3		129.5		12.13
		4/21/2017	56.5		129.4		11.83
					129.2		12.03
		5/5/2017	56.3		129.4		12.03
		5/12/2017	56.5				11.83
		5/19/2017	56.7		129.0		
		5/26/2017	56.8		128.9		11.53
		6/2/2017	56.8		128.9		11.53
				l	-		-

					essment Monit heast County L		
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)
		6/22/2016		180.19	128.5	118.5	9.99
		6/28/2016		100.10	127.8	110.0	9.29
		7/13/2016			127.9		9.39
		7/29/2016			127.4		8.89
		8/5/2016			128.1		9.59
		8/12/2016			128.2		9.69
		8/19/2016			128.0		9.49
		8/26/2016			128.2		9.69
		9/2/2016			128.2		9.69
		9/9/2016			128.2		9.69
		9/16/2016	51.2		129.0		10.49
		9/23/2016	50.9		129.3		10.79
		9/30/2016	50.3		129.9		11.39
		10/11/2016	50.1		130.1		11.59
		10/14/2016			130.2		11.69
		10/21/2016	50.0		130.2		11.69
		10/28/2016	50.1		130.1		11.59
		11/4/2016			129.9		11.39
		11/11/2016	50.9		129.3		10.79
		11/18/2016	51.0		129.2		10.69
		11/25/2016	51.0		129.2		10.69
		12/2/2016	51.1		129.1		10.59
		12/9/2016	51.6		128.6		10.09
		12/16/2016	51.3		128.9		10.39
П	SB-5	12/23/2016	51.2		129.0		10.49
	30-3	12/30/2016			129.1		10.59
		1/6/2017	51.4		128.8		10.29
		1/13/2017	51.6		128.6		10.09
		1/20/2017	51.3		128.9		10.39
		1/27/2017	51.8		128.4		9.89
		2/3/2017	51.3		128.9		10.39
		2/10/2017	51.4		128.8		10.29
		2/17/2017	52.2		128.0		9.49
		2/24/2017			128.1		9.59
		3/3/2017	51.5		128.7		10.19
		3/10/2017	52.3		127.9		9.39
		3/17/2017	53.0		127.2		8.69
		3/24/2017	53.2		127.0		8.49
		3/31/2017	53.3		126.9		8.39
		4/7/2017	53.7		126.5		7.99
		4/13/2017	53.9		126.3		7.79
		4/21/2017	53.9		126.3		7.79
		4/28/2017	54.1		126.1		7.59
		5/5/2017	54.0		126.2		7.69
		5/12/2017	54.1		126.1		7.59
		5/19/2017	54.2		126.0		7.49
		5/26/2017	54.3		125.9		7.39
		6/2/2017	54.3		125.9		7.39
		0/2/2017	54.5		120.9		1.58
					-		<u> </u>

				Appendix H			
				•	sessment Monit	-	
		Pha	ses I, II, III, IV,	and VI - Sout	heast County L	andfill	
	Qail		Denth to water	Elevation Ten	Mater Elevation	Top of Clay Elev	
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top	Water Elevation (NGVD)	(NGVD) ²	Liquid Depth Over
	Borning #	2/24/2017	55.8	PVC (NGVD) ² 184.44	128.6	(NGVD) 117.0	Clay (ft) 11.6
		2/21/2017	57.75	104.44	126.7	117.0	9.7
		2/23/2017	57.9		126.7		9.7
		2/24/2017	58.6		120.5		8.8
		3/3/2017 3/10/2017	58.4		125.8		9.0
		3/10/2017	59.0		126.0		
		3/24/2017	59.0		125.4		8.4 8.1
		3/31/2017	59.4		125.0		8.0
		4/7/2017	59.8		123.0		7.6
II	SB-15D	4/13/2017	59.8		124.0		7.5
		4/13/2017	59.9		124.5		7.5
		4/21/2017	60.2		124.5		7.5
		5/5/2017	59.9		124.2		7.5
		5/12/2017	60.2		124.5		7.2
		5/19/2017	60.4		124.2		7.0
		5/26/2017	60.5		124.0		6.9
		6/2/2017	60.5		123.9		6.9
		0/2/2017	00.5		-		-
		0/40/0047	545	400.00		447.0	
		2/16/2017	54.5	183.60	129.1	117.2	11.9
		2/17/2017	58.36		125.2		8.0
		2/20/2017	58.3		125.3		8.1
		2/23/2017	57.65		126.0		8.7
		2/24/2017	57.8		125.8		8.6
		3/3/2017	58.4		125.2		8.0
		3/10/2017	58.2		125.4		8.2
		3/17/2017	59.6		124.0		6.8
		3/24/2017	59.9		123.7		6.5
II	SB-16D	3/31/2017	59.7		123.9		6.7
		4/7/2017	60.3		123.3 123.3		6.1 6.1
		4/13/2017	60.3 60.3		123.3		6.1
		4/21/2017	60.3		123.3		5.9
		4/28/2017	60.5		123.1		6.2
		5/5/2017 5/12/2017	60.2		123.4		6.0
					123.2		
		5/19/2017	60.4 60.7		123.2		6.0 5.7
		5/26/2017					
		6/2/2017	60.6		123		5.8
					-		-

				Appendix H			
					essment Monit		
		Pha	ses I, II, III, IV,	and VI - Sout	heast County L	andfill	
	Soil	- , 1	Depth to water	Elevation Top	Water Elevation	Top of Clay Elev	Liquid Depth Over
Phase	Boring #	Date ¹	(ft tpvc)	PVC (NGVD) ²	(NGVD)	(NGVD) ²	Clay (ft)
		2/16/2017	60.3	185.47	125.2	119.6	5.6
		2/17/2017	60.31		125.2		5.6
		2/20/2017	60.2		125.3		5.7
		2/23/2017	59.90		125.6		6.0
		2/24/2017	60.1		125.4		5.8
		3/3/2017	60.7		124.8		5.2
		3/10/2017	60.6		124.9		5.3
		3/17/2017	60.9		124.6		5.0
		3/24/2017	60.9		124.6		5.0
П	SB-17D	3/31/2017	60.6		124.9		5.3
	30-170	4/7/2017	61.0		124.5		4.9
		4/13/2017	61.1		124.4		4.8
		4/21/2017	61.2		124.3		4.7
		4/28/2017	61.3		124.2		4.6
		5/5/2017	61.1		124.4		4.8
		5/12/2017	61.3		124.2		4.6
		5/19/2017	61.3		124.2		4.6
		5/26/2017	61.5		124.0		4.4
		6/2/2017	61.5		124.0		4.4
					-		-
		2/16/2017	55.1	182.71	127.6	120.3	7.3
		2/17/2017	58.91		123.8		3.5
		2/20/2017	58.8		123.9		3.6
		2/23/2017	58.70		124.0		3.7
		2/24/2017	58.9		123.8		3.5
		3/3/2017	59.2		123.5		3.2
		3/10/2017	59.2		123.5		3.2
		3/17/2017	59.4		123.3		3.0
		3/24/2017	59.6		123.1		2.8
	05.405	3/31/2017	59.2		123.5		3.2
II	SB-18D	4/7/2017	59.5		123.2		2.9
		4/13/2017	59.7		123.0		2.7
		4/21/2017	59.5		123.2		2.9
		4/28/2017	59.7		123.0		2.7
		5/5/2017	59.5		123.2		2.9
		5/12/2017	59.6		123.1		2.8
		5/19/2017	59.7		123.0		2.7
		5/26/2017	59.7		123.0		2.7
		6/2/2017	59.6		123.1		2.8
		5,2,2011			-		-
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				Appendix H			
		W	ater Level Dat	a - Liquid Ass	essment Monit	toring	
		Pha	ses I, II, III, IV,	and VI - Sout	heast County L	andfill	
Phase	Soil	Date ¹	Depth to water	Elevation Top	Water Elevation	Top of Clay Elev	Liquid Depth Over
Flidse	Boring #	Dale	(ft tpvc)	PVC (NGVD) ²	(NGVD)	(NGVD) ²	Clay (ft)
		2/16/2017	87.5	203.06	115.6	114.2	1.4
		2/17/2017	87.30		115.8		1.6
		2/20/2017	87.2		115.9		1.7
		2/23/2017	87.10		116.0		1.8
		2/24/2017	86.5		116.6		2.4
		3/3/2017	87.3		115.8		1.6
		3/10/2017	87.2		115.9		1.7
		3/17/2017	87.3		115.8		1.6
		3/24/2017	87.3		115.8		1.6
		3/31/2017	87.2		115.9		1.7
111	SB-19D	4/7/2017	87.3		115.8		1.6
		4/13/2017	87.3		115.8		1.6
		4/21/2017	87.4		115.7		1.5
		4/28/2017	87.4		115.7		1.5
		5/5/2017	87.2		115.9		1.7
		5/12/2017	87.3		115.8		1.6
		5/19/2017	87.4		115.7		1.5
		5/26/2017	87.4		115.7		1.5
		6/2/2017	87.3		115.8		1.6
					-		-
		3/3/2017	78.6	203.36	DRY	N/A	N/A
		3/10/2017	78.6	200.00	DRY		N/A
		3/17/2017	78.5		DRY		N/A
		3/24/2017	78.5		DRY		N/A
		3/31/2017	78.5		DRY		N/A
		4/7/2017	78.4		DRY		N/A
		4/13/2017	78.5		DRY		N/A
111	SB-19S	4/21/2017	78.6		DRY		N/A
		4/28/2017	78.5		DRY		N/A
		5/5/2017	78.5		DRY		N/A
		5/12/2017	78.6		DRY		N/A
		5/19/2017	78.5		DRY		N/A
		5/26/2017	78.5		DRY		N/A
		6/2/2017	78.5		DRY		N/A
		0,2,2011	10.0		Ditti		

				Appendix H			
				-	essment Moni	-	
		Pna	ses I, II, III, IV,	and VI - Sout	heast County I	Landfill	
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)
	Bonng //	2/16/2017	74.4	192.86	118.5	115.0	3.5
		2/17/2017	75.83	102.00	117.0	110.0	2.0
		2/20/2017	75.7		117.2		2.2
		2/23/2017	75.65		117.2		2.2
		2/24/2017	75.7		117.2		2.2
		3/3/2017	75.9		117.0		2.0
		3/10/2017	75.8		117.1		2.0
		3/17/2017	75.7		117.2		2.2
		3/24/2017	75.9		117.0		2.0
		3/31/2017	75.8		117.1		2.0
III	SB-20D	4/7/2017	75.9		117.0		2.0
		4/13/2017	76.0		116.9		1.9
		4/21/2017	75.9		117.0		2.0
		4/28/2017	76.1		116.8		1.8
		5/5/2017	75.9		117.0		2.0
		5/12/2017	76.0		116.9		1.9
		5/12/2017	76.1		116.8		1.9
		5/26/2017	76.0		116.9		
			76.0		116.9		1.9 1.9
		6/2/2017	70.0		-		-
		2/16/2017	79.1	194.30	115.2	113.0	2.2
		2/17/2017	79.18		115.1		2.1
		2/20/2017	79.4		114.9		1.9
		2/23/2017	79.05		115.3		2.3
		2/24/2017	79.2		115.1		2.1
		3/3/2017	79.2		115.1		2.1
		3/10/2017	79.2		115.1		2.1
		3/17/2017	79.1		115.2		2.2
		3/24/2017	79.2		115.1		2.1
		3/31/2017	79.0		115.3		2.3
VI	SB-21D	4/7/2017	79.2		115.1		2.1
		4/13/2017	79.2		115.1		2.1
		4/21/2017	79.2		115.1		2.1
		4/28/2017	79.3		115.0		2.0
		5/5/2017	79.2		115.1		2.1
		5/12/2017	79.2		115.1		2.1
		5/19/2017	79.3		115.0		2.0
		5/26/2017	79.4		114.9		1.9
		6/2/2017	79.3		115.0		2.0
		5,2,2011			-		-

		۸۸	ator Loval Date	Appendix H	essment Monit	toring	
				•	heast County L	-	
					-		
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)
	20g //	2/17/2017	78.5	193.05	114.6	113.2	1.4
		2/17/2017	78.97	100.00	114.1	110.2	0.9
		2/20/2017	78.8		114.3		1.1
		2/23/2017	78.00		115.1		1.9
		2/24/2017	78.1		115.0		1.8
		3/3/2017	78.1		115.0		1.8
		3/10/2017	78.2		114.9		1.7
		3/17/2017	78.1		115.0		1.8
		3/24/2017	78.0		115.1		1.9
		3/31/2017	77.9		115.2		2.0
VI	SB-22D	4/7/2017	78.0		115.1		1.9
		4/13/2017	78.1		115.0		1.8
		4/21/2017	78.2		114.9		1.7
		4/28/2017	78.2		114.9		1.7
		5/5/2017	78.1		114.9		1.7
		5/12/2017	78.2		114.9		1.7
		5/19/2017	78.2		114.9		1.7
		5/26/2017	78.2		114.9		1.7
			78.2		114.9		1.7
		6/2/2017	10.2		-		-
		2/16/2017	83.9	199.70	115.8	113.3	2.5
		2/17/2017	84.0		115.7		2.4
		2/20/2017	84.1		115.6		2.3
		2/23/2017	83.85		115.9		2.6
		2/24/2017	83.9		115.8		2.5
		3/3/2017	84.0		115.7		2.4
		3/10/2017	84.0		115.7		2.4
		3/17/2017	84.0		115.7		2.4
		3/24/2017	83.9		115.8		2.5
р. <i>4</i>	00.000	3/31/2017	84.5		115.2		1.9
IV	SB-23D	4/7/2017	83.9		115.8		2.5
		4/13/2017	84.0		115.7		2.4
		4/21/2017	84.1		115.6		2.3
		4/28/2017	84.1		115.6		2.3
		5/5/2017	84.1		115.6		2.3
		5/12/2017	84.3		115.4		2.1
		5/19/2017	84.2		115.5		2.2
		5/26/2017	84.2		115.5		2.2
		6/2/2017	84.2		115.5		2.2
		5,2,2011	0112		-		-

				•	sessment Monit heast County L	-	
Phase	Soil Boring #	Date ¹	Depth to water (ft tpvc)	Elevation Top PVC (NGVD) ²	Water Elevation (NGVD)	Top of Clay Elev (NGVD) ²	Liquid Depth Over Clay (ft)
		2/23/2017	80.4	199.45	DRY	N/A	N/A
		2/24/2017	80.4		DRY		N/A
		3/3/2017	80.4		DRY		N/A
		3/10/2017	80.3		DRY		N/A
		3/17/2017	80.3		DRY		N/A
		3/24/2017	80.3		DRY		N/A
		3/31/2017	80.3		DRY		N/A
		4/7/2017	80.2		DRY		N/A
IV	SB-23S	4/13/2017	80.2		DRY		N/A
		4/21/2017	80.2		DRY		N/A
	1 F	4/28/2017	80.2		DRY		N/A
	1 F	5/5/2017	80.2		DRY		N/A N/A
	I F	5/12/2017	80.1		DRY		N/A N/A
	I F		80.1		DRY		N/A N/A
		5/19/2017					
		5/26/2017	80.1		DRY		N/A
	-	6/2/2017	80.1		DRY		N/A
		3/3/2017	66.3	100.00	122.5	117.6	4.0
		3/10/2017	66.3	188.82	122.5	117.0	4.9 4.9
	I F	3/17/2017	66.5		122.3		4.9
		3/24/2017	66.6		122.3		4.7
		3/31/2017	66.3		122.5		4.9
		4/7/2017	66.6		122.2		4.6
		4/13/2017	66.8		122.0		4.4
П	SB-24D	4/21/2017	66.8		122.0		4.4
		4/28/2017	67.0		121.8		4.2
		5/5/2017	66.8		122.0		4.4
		5/12/2017	67.2		121.6		4.0
	1 [5/19/2017	67.3		121.5		3.9
	1 [5/26/2017	67.3		121.5		3.9
	-	6/2/2017	67.4		121.4		3.8
					-		-
	1 L	3/10/2017	80.6	208.83	128.2	117.5	10.7
		3/17/2017	80.8		128.0		10.5
	1 F	3/24/2017	80.8		128.0		10.5
	1 F	3/31/2017	80.4		128.4		10.9
		4/7/2017	80.6		128.2		10.7
	1 F	4/13/2017 4/21/2017	80.8		128.0		10.5
I	SB-25D	4/21/2017 4/28/2017	80.8 85.5	213.83	128.0 128.3	See Note 3	10.5
	1 F	5/5/2017	85.2	213.03	120.3	SEE NULE S	10.8 11.1
	1 F	5/15/2017	83.6	211.40	120.0	See Note 4	10.3
	1 F	5/19/2017	83.8	211.40	127.6		10.3
	1 F	5/26/2017	83.8		127.6		10.1
	1 F	6/2/2017	83.9		127.0		11.1
	1 F	57272011	00.0		-		-

				Appendix H			
		W	ater Level Data	a - Liquid Ass	essment Monit	toring	
		Pha	ses I, II, III, IV,	and VI - Sout	heast County L	andfill	
	г – т				· · · · · · · · · · · · · · · · · · ·		1
Phase	Soil	Date ¹	Depth to water	Elevation Top	Water Elevation	Top of Clay Elev	Liquid Depth Over
	Boring #	Duto	(ft tpvc)	PVC (NGVD) ²	(NGVD)	(NGVD) ²	Clay (ft)
		4/14/2017	25.3	148.36	123.1	119.3	3.8
		4/17/2017	25.3		123.1		3.8
		4/19/2017	25.2		123.2		3.9
		4/21/2017	25.1		123.3		4.0
		4/26/2017	25.12		123.24		3.94
П	SB-26	4/28/2017	25.2		123.2		3.9
	00-20	5/5/2017	25.1		123.3		4.0
	_	5/12/2017	25.3		123.1		3.8
	_	5/19/2017	25.3		123.1		3.8
		5/26/2017	25.5		122.9		3.6
		6/2/2017	25.5		122.9		3.6
					-		-
		4/13/2017	15.7	138.11	122.4	120.6	1.8
		4/17/2017	15.7		122.4		1.8
		4/19/2017	15.7		122.4		1.8
		4/21/2017	15.6		122.5		1.9
		4/26/2017	15.52		122.59		1.99
П	SB-27	4/28/2017	15.7		122.4		1.8
	30-27	5/5/2017	15.6		122.5		1.9
		5/12/2017	15.6		122.5		1.9
		5/19/2017	15.7		122.4		1.8
		5/26/2017	15.8		122.3		1.7
		6/2/2017	15.7		122.4		1.8
					-		-
		5/5/2017	87.5	208.62	121.1	116.7	4.4
		5/12/2017	87.3		121.3		4.6
		5/19/2017	87.3		121.3		4.6
	SB-28D	5/26/2017	87.3		121.3		4.6
		6/2/2017	87.5		121.1		4.4
					-		-
		5/5/2017	78.5	207.86	129.4	117.5	11.9
		5/12/2017	78.5	201.00	129.4	11 <i>1</i> .J	13.2
		5/19/2017	77.4		130.5		13.0
	SB-29	5/26/2017	79.3		128.6		11.1
		6/2/2017	82.3		125.6		8.1
		0, _, _ 0 11	02.0		-		-
		F/F/00/7	04.0	400 50		447.0	
		5/5/2017	64.3	189.53	125.2	117.8	7.4
		5/12/2017	64.7		124.8		7.0
П	SB-30	5/19/2017	64.8		124.7		6.9
		5/26/2017	65.7		123.8		6.0
		6/2/2017	65.7		123.8		6.0
					-		-

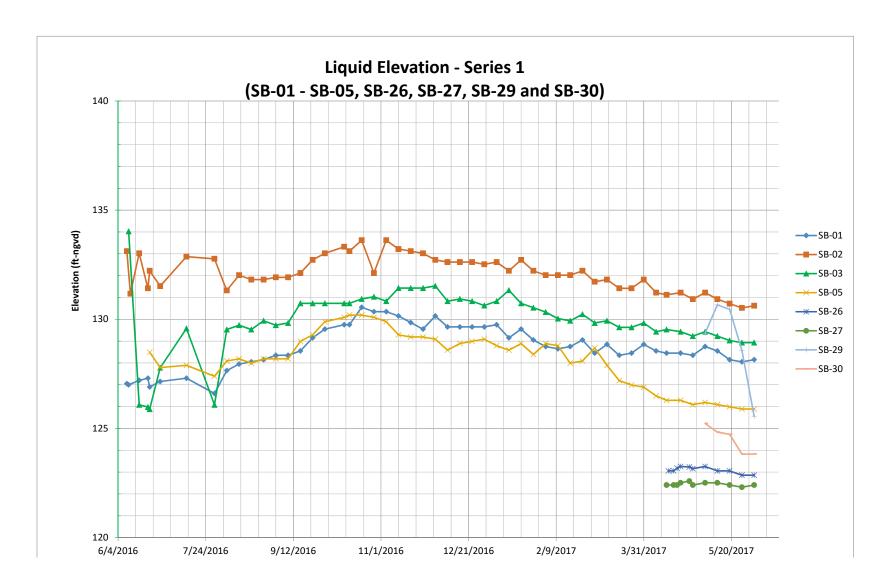
Notes:

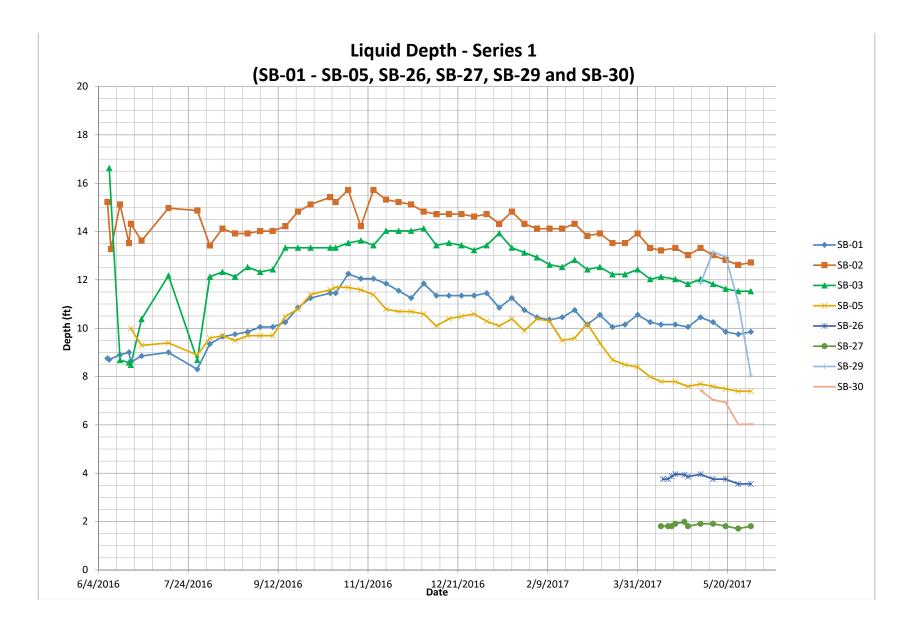
1. Water levels collected in SB-15 through SB-23D on 2/16/17 are prior to development.

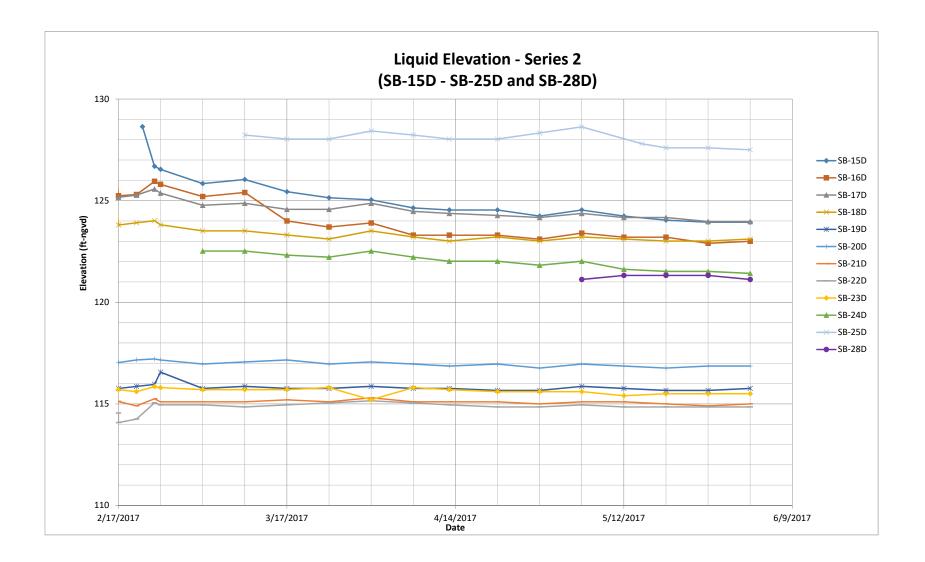
2. Approximate elevations

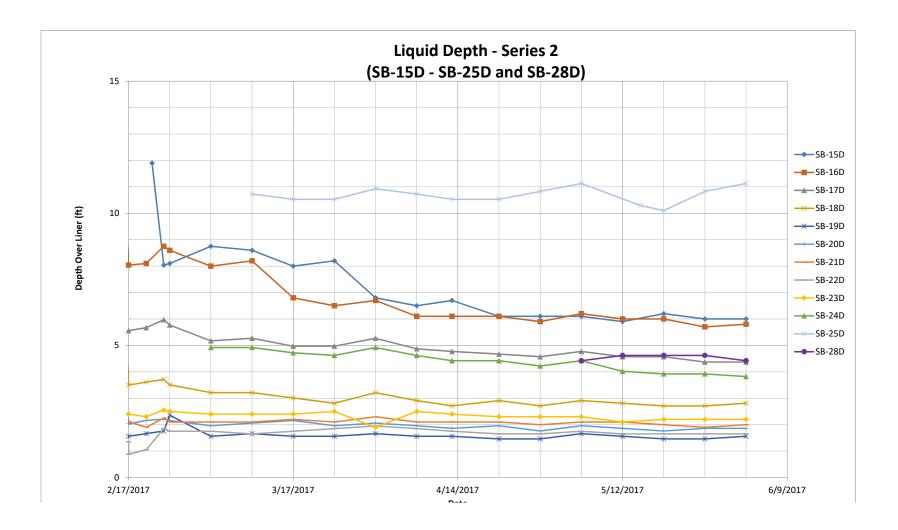
3. Extended riser at SB-25D due to waste filling operations.

4. Lowered riser at SB-25D in order to conduct pump test.



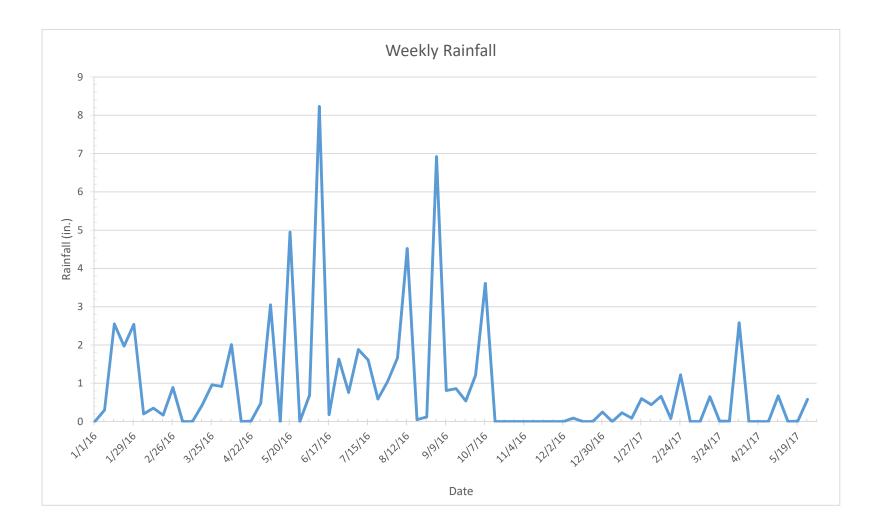






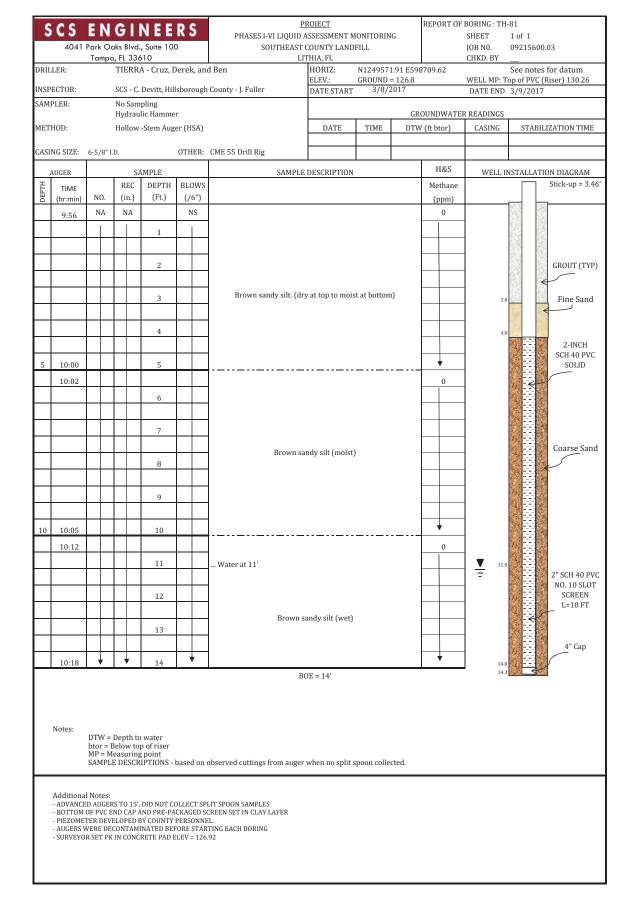
	Appendi Rainfall I quid Assessme Southeast Cour	Data nt Monitoring
Week Ending	Rainfall (in.)	Remarks
1/1/16	0	
1/8/16	0.3	
1/15/16	2.55	
1/22/16	1.97	
1/29/16	2.54	
2/5/16	0.2	
2/12/16	0.35	
2/19/16	0.17	
2/26/16	0.89	
3/4/16	0	
3/11/16	0	
3/18/16	0.43	
3/25/16	0.96	
4/1/16	0.92	
4/8/16	2.01	
4/15/16	0	
4/22/16	0.01	
4/29/16	0.48	
5/6/16	3.05	
5/13/16	0	
5/20/16	4.95	
5/27/16	0	
6/3/16	0.69	
6/10/16	8.23	
6/17/16	0.18	
6/24/16	1.63	
7/1/16	0.76	
7/8/16	1.88	
7/15/16	1.61	
7/22/16	0.59	
7/29/16	1.05	
8/5/16	1.66	
8/12/16	4.52	
8/19/16	0.05	
8/26/16	0.12	
9/2/16	6.92	
9/9/16	0.81	
9/16/16	0.86	
9/23/16	0.54	
9/30/16	1.21	
10/7/16	3.61	
10/14/16	0	

	Appendix Rainfall Da quid Assessmen Southeast Count	ata t Monitoring
Week Ending	Rainfall (in.)	Remarks
10/21/16	0	
10/28/16	0	
11/4/16	0	
11/11/16	0	
11/18/16	0	
11/25/16	0	
12/2/16	0	
12/9/16	0.09	
12/16/16	0	
12/23/16	0	
12/30/16	0.25	
1/6/17	0	
1/13/17	0.23	
1/20/17	0.09	
1/27/17	0.6	
2/3/17	0.44	
2/10/17	0.66	
2/17/17	0.08	
2/24/17	1.22	
3/3/17	0	
3/10/17	0	
3/17/17	0.65	
3/24/17	0.01	
3/31/17	0.01	
4/7/17	2.58	
4/14/17	0	
4/21/17	0	
4/28/17	0	
5/5/17	0.67	
5/12/17	0	
5/19/17	0.01	
5/26/17	0.58	
6/2/17	0.33	
6/9/17		

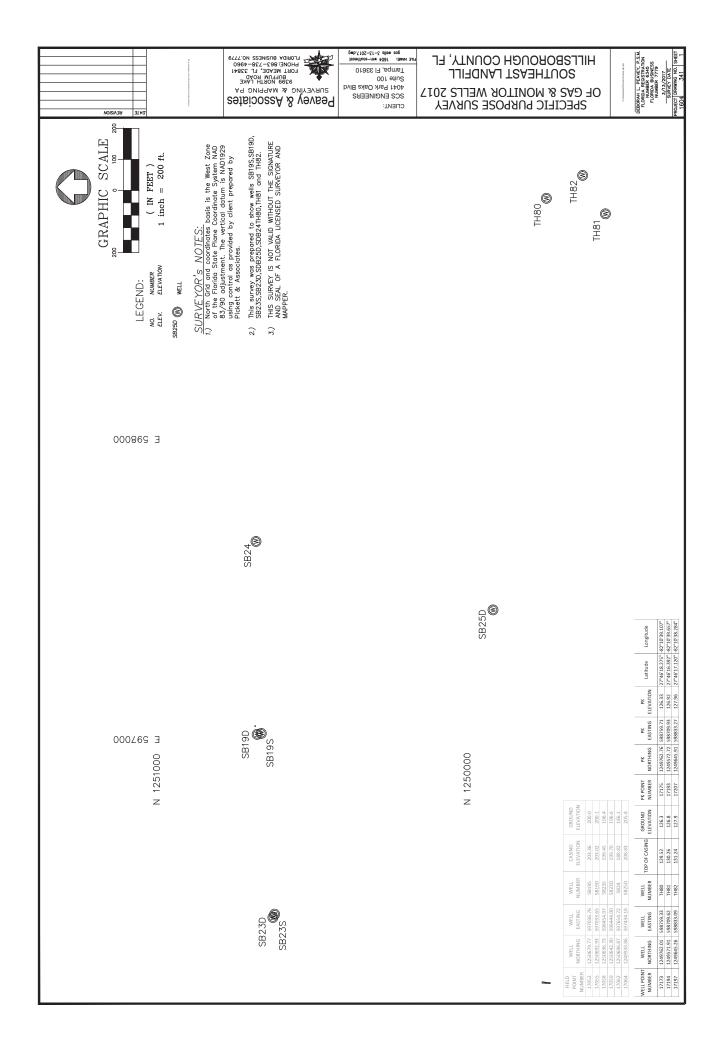


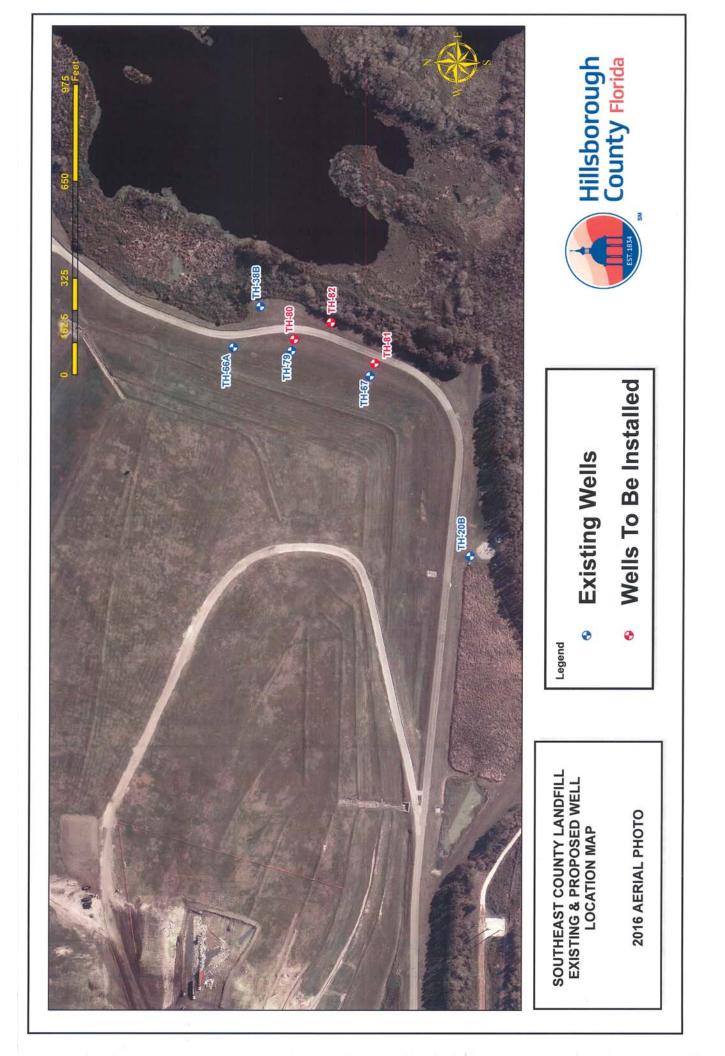
Appendix I Shallow Groundwater Monitoring Wells

		Park O	aks B		EE iite 100		PHASES I-VI LIQUID SOUTHEAST	<u>ROJECT</u> ASSESSMENT M COUNTY LAND THIA, FL		G	REPORT OF	BORING : TH SHEET JOB NO. CHKD. BY	I-80 1 of 1 09215600.03
ORILLER	R:	. unip	· ·			erek,	nd Ben	HORIZ:	N1249762		3759.33		See notes for datum
NSPECT	'OR:		SCS	- C. Dev	/itt, Hill	sborou	gh County - J. Fuller	ELEV.: DATE START	GROUND = 3/8/2				Top of PVC (Riser) 129.52 3/9/2017
AMPLEF	R:			amplin	ıg Tammei					CD	OUNDWATEI	DEADINCE	
4ethod):				em Auge)	DATE	TIME		/ (ft btor)	CASING	STABILIZATION TIM
							,				(
ASING S	SIZE:	6-5/8"	.D.			OTHE	: CME 55 Drill Rig						
AUGE	ER		1	SAMP			1	DESCRIPTION			H&S	WELL I	INSTALLATION DIAGRAM
5	TIME	NO.	RE (in		EPTH (Ft.)	BLOV (/6"					Methane		Stick-up = 3.
	r:min) 4:28	NO.	N.	-	(1.1)	NS					(ppm) 0		
12	4:20				1	1	-					-	
					1		-					-	
					2		Brow	n sand (dry)				-	GROUT (TY
					2		-						
			$\uparrow \uparrow$		3	+	1					3.0	.0 Fine Sand
					5	+	1					3.	
			\uparrow		4							4.0	.0
			$\uparrow \uparrow$				Gray clay (1	noderately moi	ist)			4.0	2-INCH
5 14	4:38				5		1				+		SCH 40 PV SOLID
	4:40				-		Gray	clay (moist)			0	-	
					6		Water at 6'					V 5.0	
					-							5.0	王
					7							-	王
													Coarse Sar
					8								1948 1950
					9		Linken men den in men		()	-) (t)			<u>演</u> 審課
							Lighter gray clay, increased	conesiveness	(pnospnatic	c) (wet)			
10 14	4:48				10						+		善
14	4:51										0		
					11		Light gray n	osphatic clay (wet)				2" SCH 40 P
								(iretj				NO. 10 SLO
			\square		12		4					-	SCREEN L=10 FT
		\square	\square				_						
					13		4					13.0	.0
		\square					Brown	silty clay (wet)				-	
		\square			14		4				┝──	-	
		\vdash	╞	_		-	4					-	4" Cap
15 14	4:59	*	•		15	•		OE = 15'			↓	15.0	10.10 March 10.00

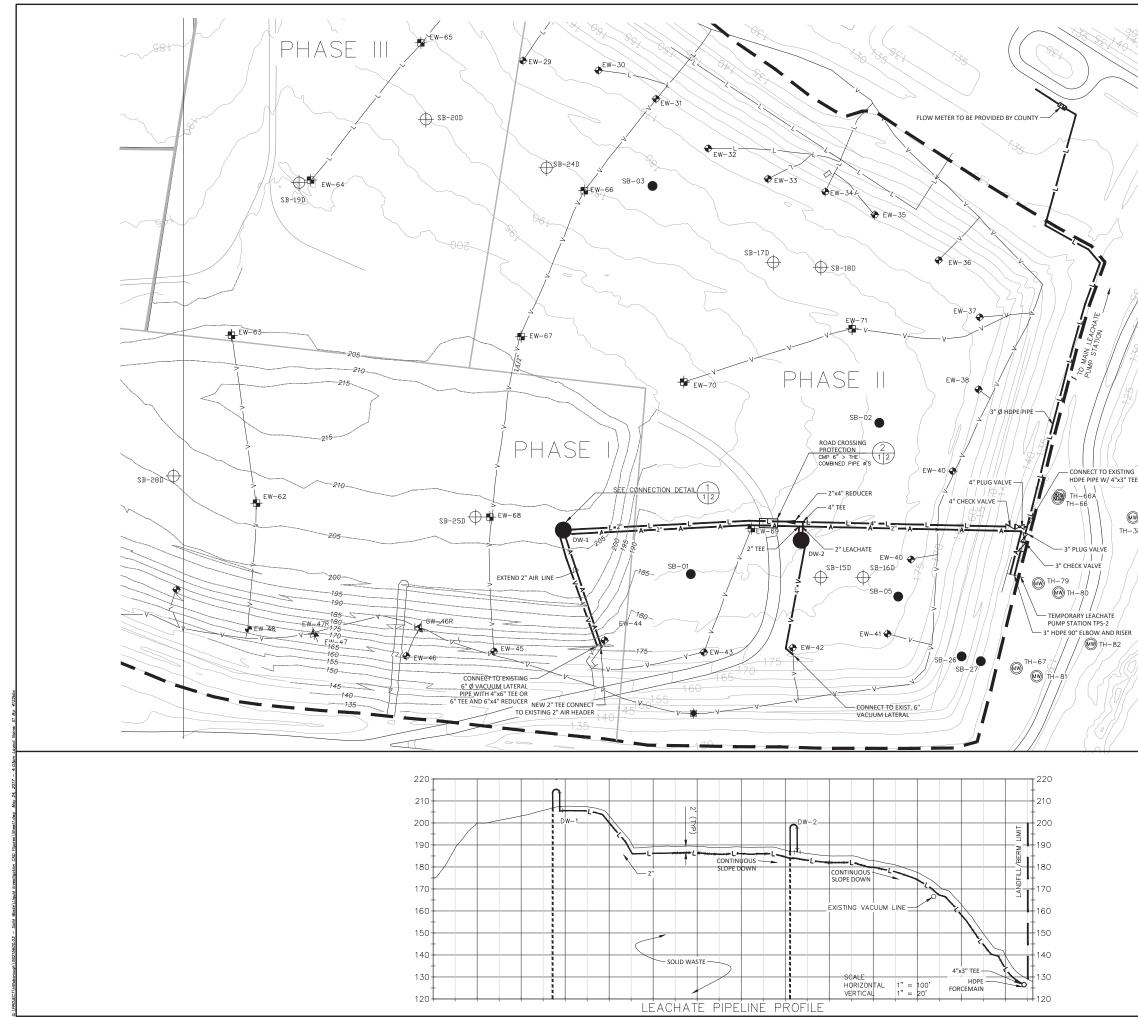


No Sam Hydrau Hollow .D.	pling lic Hammer -Stem Auge	r er (HSA)	County - J. Fuller DATE START DATE T DATE T CME 55 Drill Rig SAMPLE DESCRIPTION		ROUNDWATEI W (ft btor) H&S	CASING	STABILIZATION TIME
Hydrau Hollow D. SA REC (in.)	lic Hammer -Stem Auge AMPLE DEPTH	er (HSA) OTHER: BLOWS	CME 55 Drill Rig		W (ft btor)	CASING	STABILIZATION TIME
.D. SA REC (in.)	AMPLE	OTHER:	CME 55 Drill Rig		1		STADILIZATION TIME
S/ REC (in.)	AMPLE DEPTH	BLOWS			H&S	WELL IN	
REC (in.)	DEPTH		SAMPLE DESCRIPTION		Паз	WELL IN	
(in.)					Methane		Stick-up = 3.34
NA					(ppm)		
		NS			0		50 S
	1						
	2						GROUT (TYP)
	3		Brown sandy silt (dry at top to moist at	bottom)		3.0	Fine Sand
	4					4.0	2-INCH
							SCH 40 PVC SOLID
	5				¥		SOLID
					0		< <
	6					5.0	
			Dark brown sandy silt (moist)				
	7						「
	8		Water at 8'			8.0	
						=	
	9		Dark brown sandy silt (wet)				Coarse Sand
	10				+		「「「」
					0		2" SCH 40 PVC NO. 10 SLOT SCREEN L=10 FT
	11		Dark brown sandy silt (wet)				SCREEN L=10 FT
	12		Hard drilling 12'				
					$\mid \mid \mid$		
-	13	- -					
			Dark brown sandy silt (wet)				が葺い
$\left \right $	14				-		
\vdash		\vdash			<u> </u>		4" Cap
	15	*	BOE = 15'		♥	15.0	· ·
		5 6 7 8 9 10 11 12 13 14	5 6 7 7 8 9 10 11 11 12 13 14	Image: Second state of the second s	Image: Second state of the second s	I I	1 1

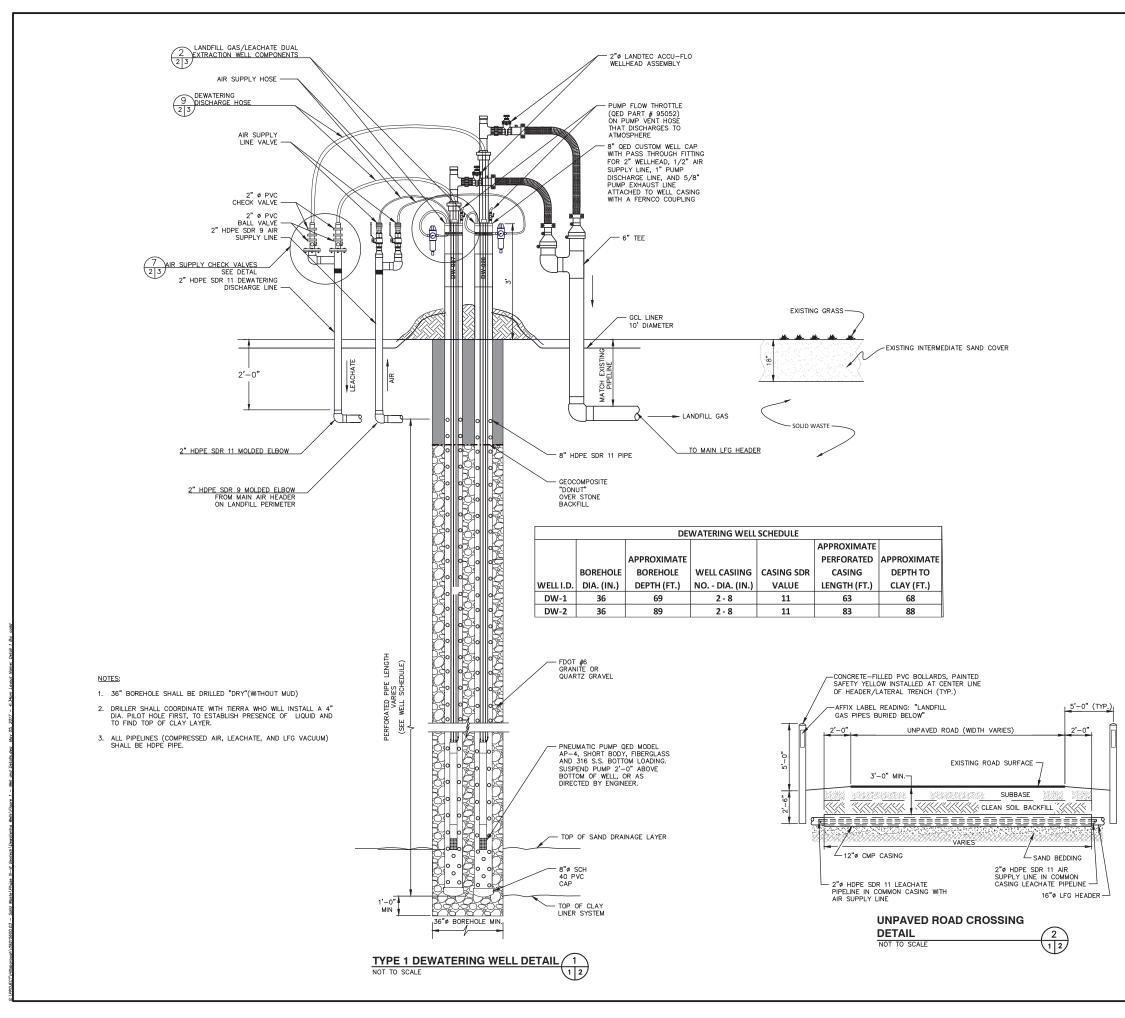




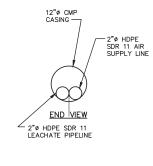
Attachment 2 Dewatering Wells Plan and Details



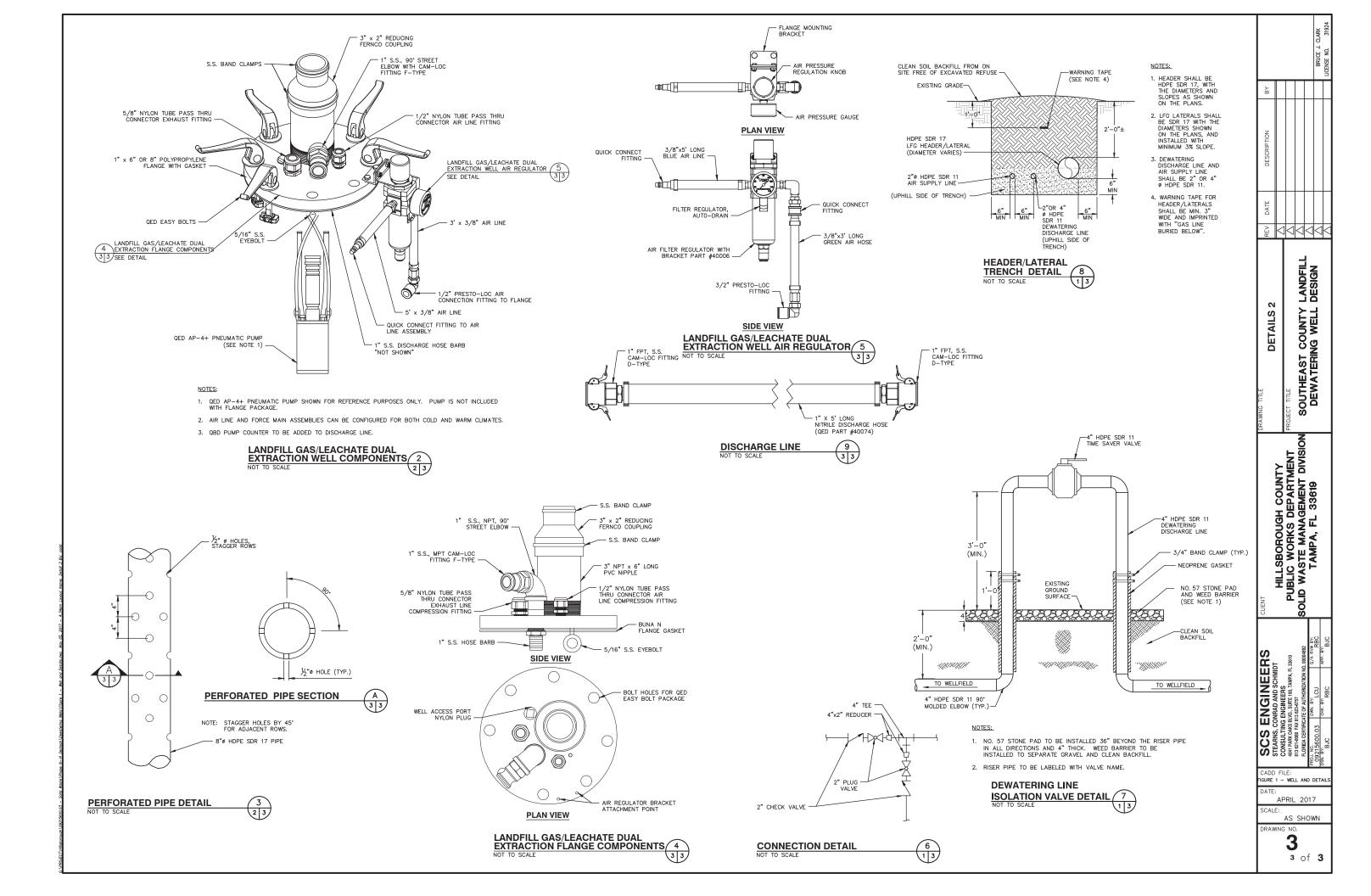
Ņ				BRUCE J. CLARK	LICENSE NO. 31924
100 50 0 100 SCALE IN FEET	DESCRIPTION				
DW-2 LEACHATE DEWATERING WELL & PUMP - APPROXIMATE ● EW-61 LANDFILL GAS (LFG) EXTRACTION WELL (CASSON) - EXISTING ● EW-45 LANDFILL GAS (LFG) EXTRACTION WELL - EXISTING ● EW-45 LANDFILL GAS (LFG) EXTRACTION WELL - EXISTING ● TH-81 MONITOR WELLS ● SB-01 FIRST SERIES PIEZOMETER ● SB-26 SECOND SERIES PIEZOMETER ● SB-26 SECOND SERIES PIEZOMETER ● A PRESSURIZED AIR LINE - EXISTING ● LANDFILL LIMIT/BERM ● PHASE LIMIT ● A PRESSURIZED AIR LINE - EXISTING ● L LEACHATE LINE - EXISTING ■ LEACHATE LINE - PROPOSED L ■ LEACHATE LINE - PROPOSED ■ V VACUUM LINE - EXISTING ■ VACUUM LINE - EXISTING ■ VACUUM LINE - PROPOSED NOTES: 1 LOCATIONS OF DEWATERING WELLS TO BE 1 LOCATIONS OF DEWATERING WELLS TO BE DETERMINED FOLLOWING PILOT HOLE PIEZOMETER INDICATED ON DRAWING ARE SHOWN AS TYPICAL EXAMPLES.	PIPING SITE PLAN AND PROFILE REV DATE	PROJECT TITLE	DUNTY	DEWATERING WELL DESIGN	
& ASSOCIATES. PLAN DOES NOT ACCURATELY SHOW PHASE I GRADES.		HILLSBURUUGH CUUNIT PUBLIC WORKS DEPARTMENT	z	TAMPA, FL 33619	
	SCS ENGINEERS STEARNS CONFRO AND SOCHMIDT	FILE: SHEE APRIL	FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892	12 PROJ. NO. 09215600.03 DWN. BY: QA RVW BY: 200215600.03 DWN. BY: CU 24 RBC	DSN. BY: CHK. BY: APP. BY: BJC RBC APP. BY:



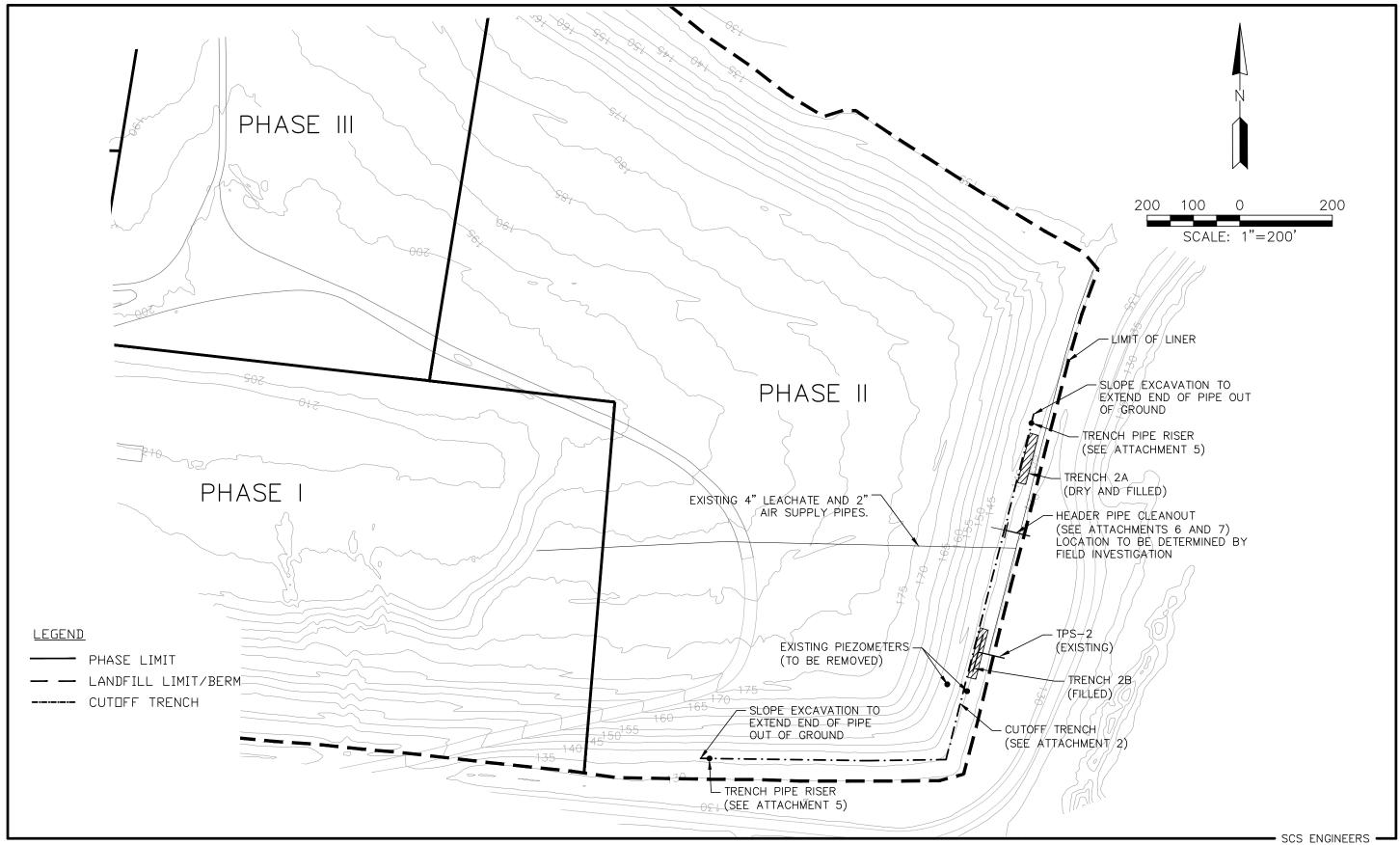
DATE DESCRIPTION BY					BRUCE J. CLARK	LICENSE NO. 31924
REV D	4	\triangleleft	\triangleleft	\triangleleft	\triangleleft	
DRAWING TITLE DETAILS 1		PROJECT TITLE	IN SOUTHEAST COUNTY LANDEILI			
CLENT HILLSBOROUGH COUNTY PUBLIC WORKS DEPARTMENT SOLID WASTE MANAGEMENT DIVISION TAMPA, FL 33619						
SCS ENGINEERS		4	813 621-0080 FAX 813 623-6757 EL ORIDA CERTIFICATE OF ALITHORIZATION NO AMM4892	PROJ. NO. DWN. BY: QARWWW.	09215600.03 LCU RBC	
CADD FIGURE DATE: SCALE	FIL 1 – AP	RIL	LL ▲ 2 S⊢).	017	7	AILS



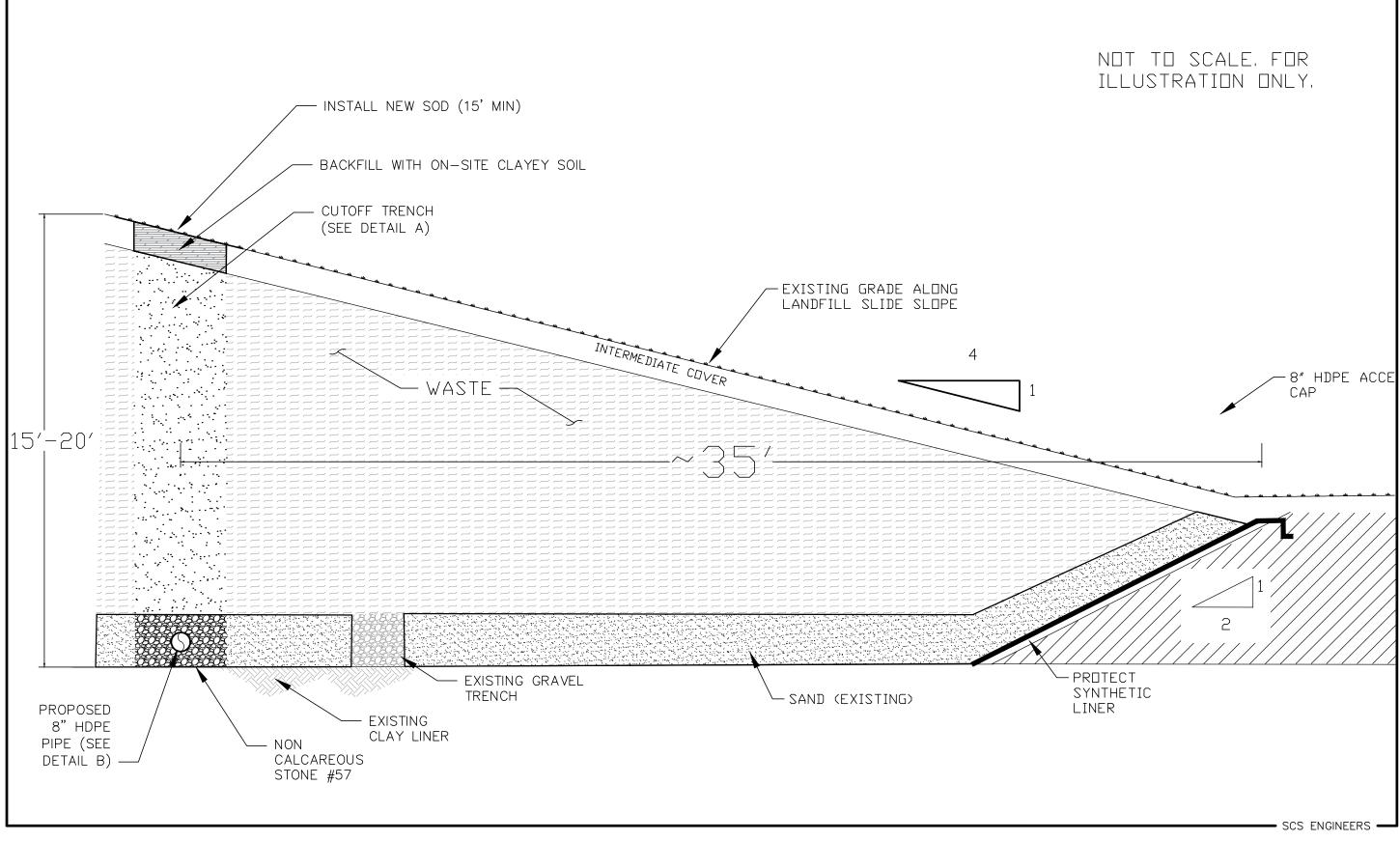
- NOTES: 1. CONTRACTOR RESTORED ROAD TO MATCH ORIGINAL CONDITIONS.
- 2. CONTRACTOR INSTALLED 2 BOLLARDS, ONE AT EACH END OF THE CMP CASING. BOLLARDS WERE PAINTED SAFETY YELLOW AND LABELED "LANDFILL GAS PIPES BURIED BELOW".
- 3. SUBBASE CONSISTS OF 12" OF TYPE "B" STABILIZATION MIN. LBR 40.



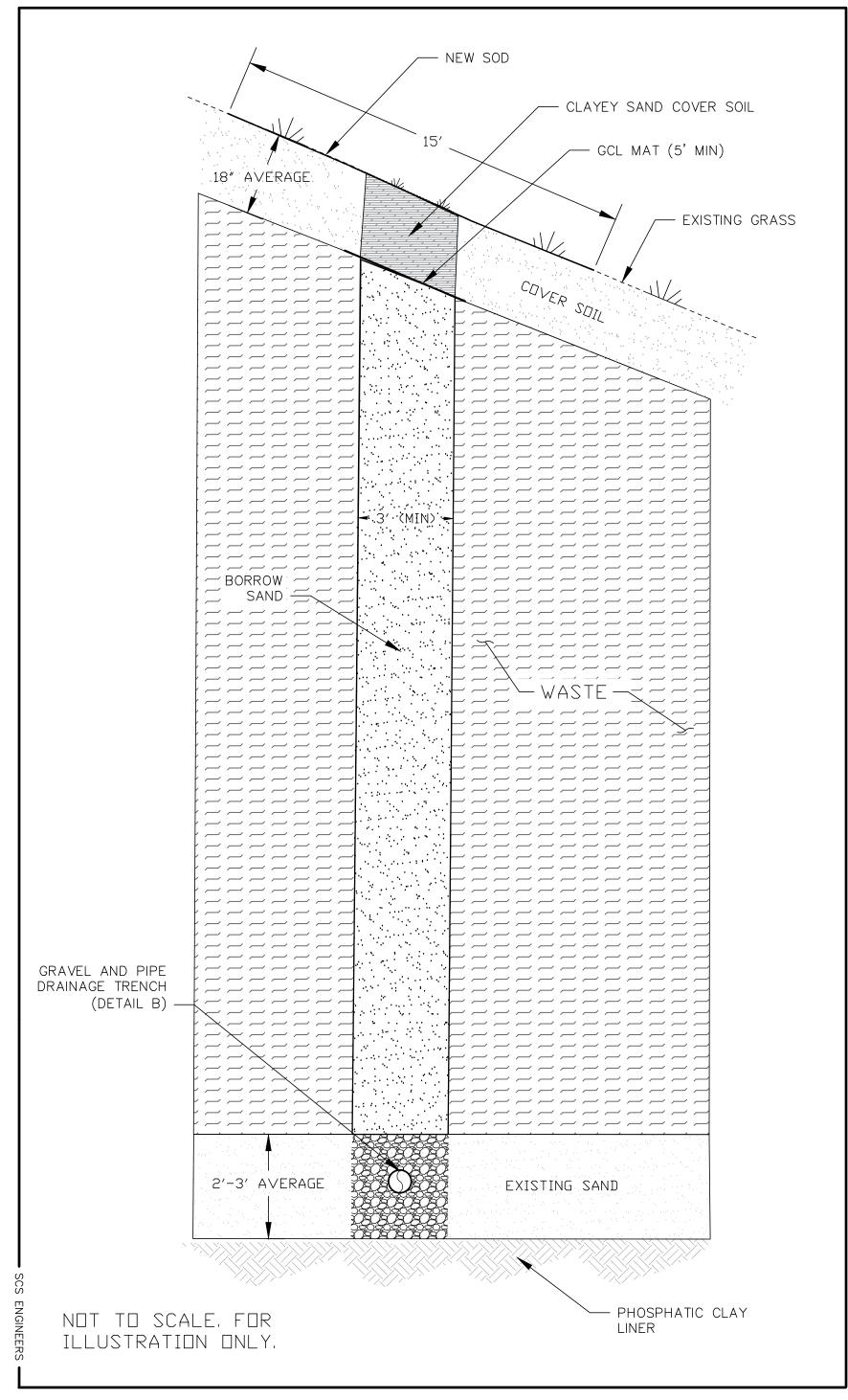
Attachment 3 Proposed Cut-Off Trench Plan and Details



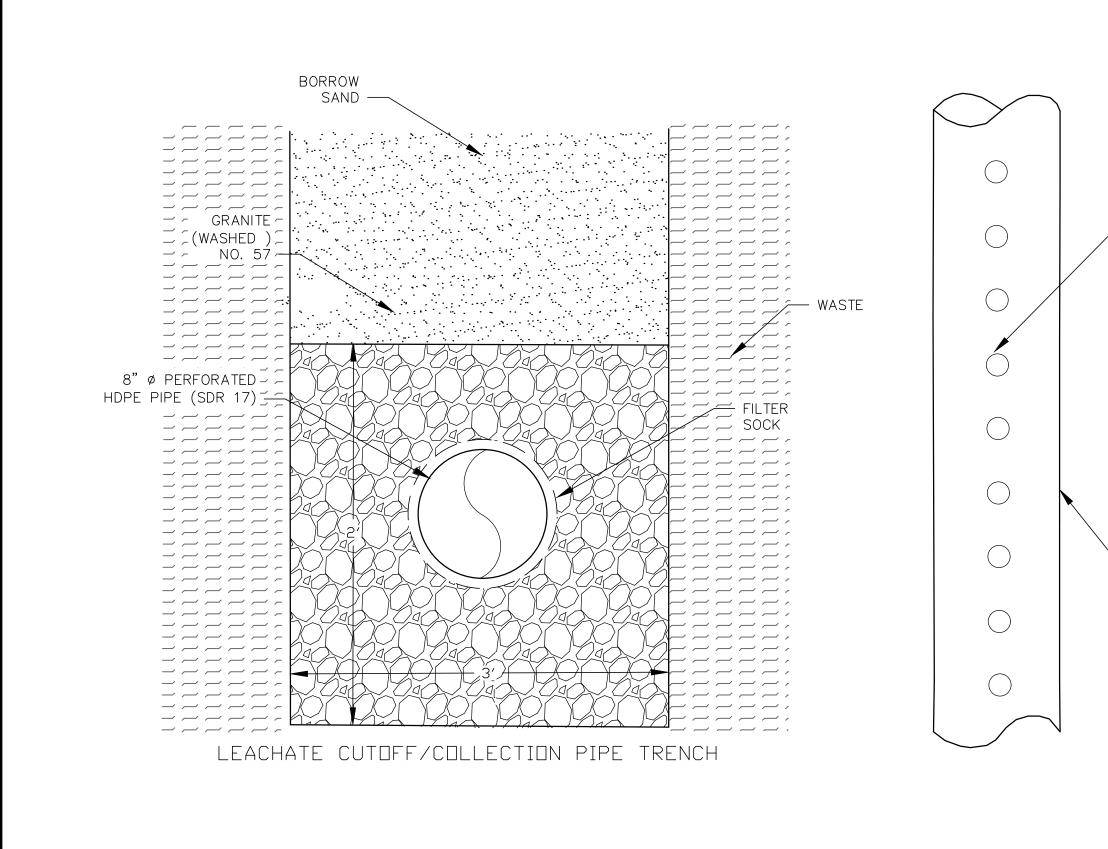
ATTACHMENT 1. PROPOSED PHASE II CUTOFF TRENCH INSTALLATION SOUTHEAST COUNTY LANDFILL MAY 2017

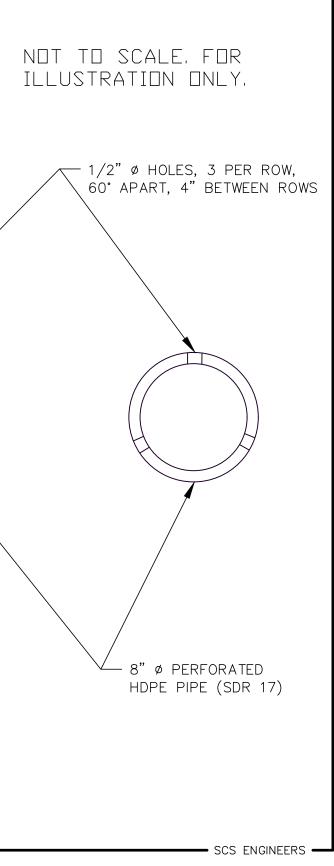


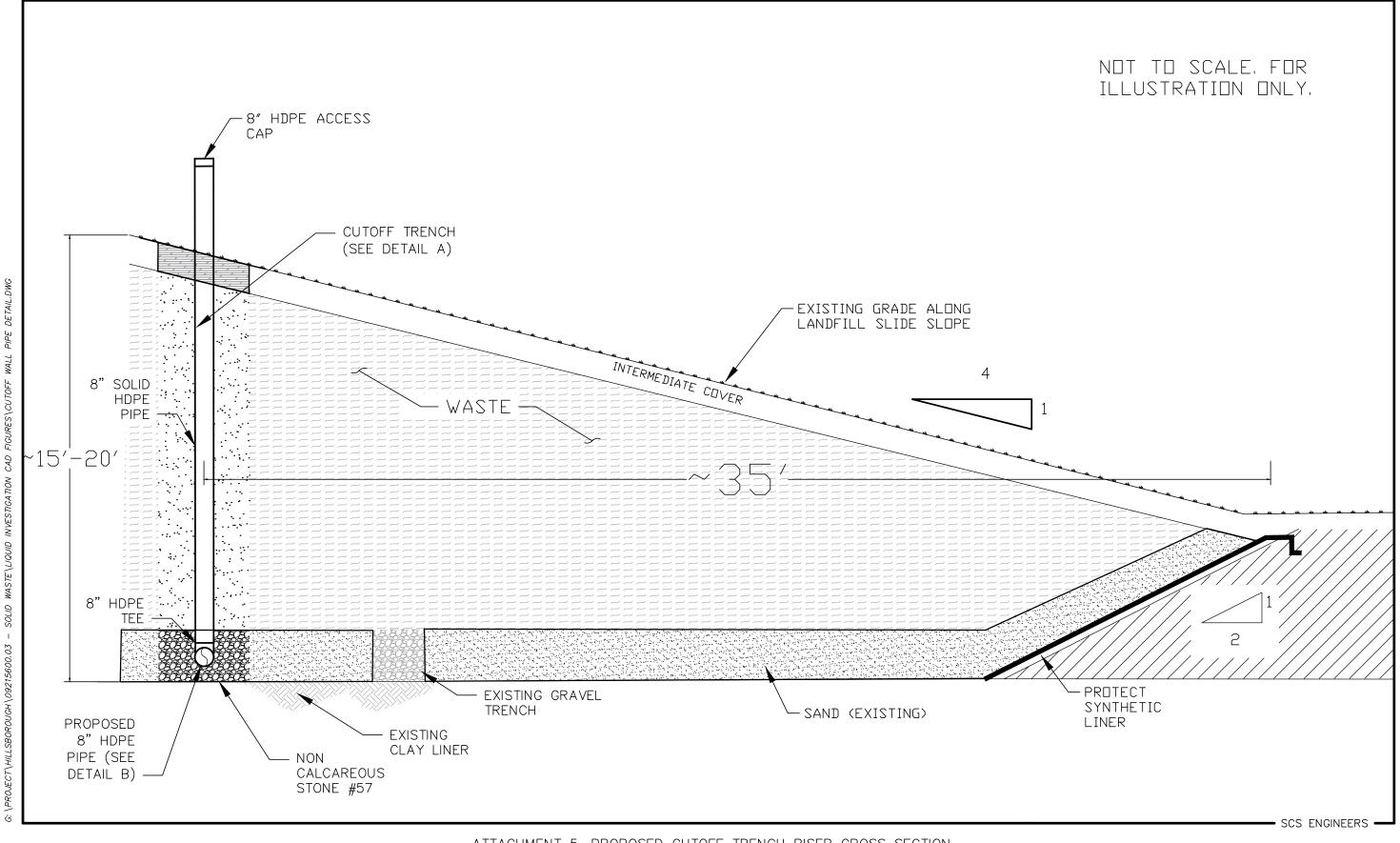
ATTACHMENT 2. PROPOSED CUTOFF TRENCH CROSS SECTION SOUTHEAST COUNTY LANDFILL MAY 2017



ATTACHMENT 3. DETAIL A – CUTOFF TRENCH SOUTHEAST COUNTY LANDFILL MAY 2017







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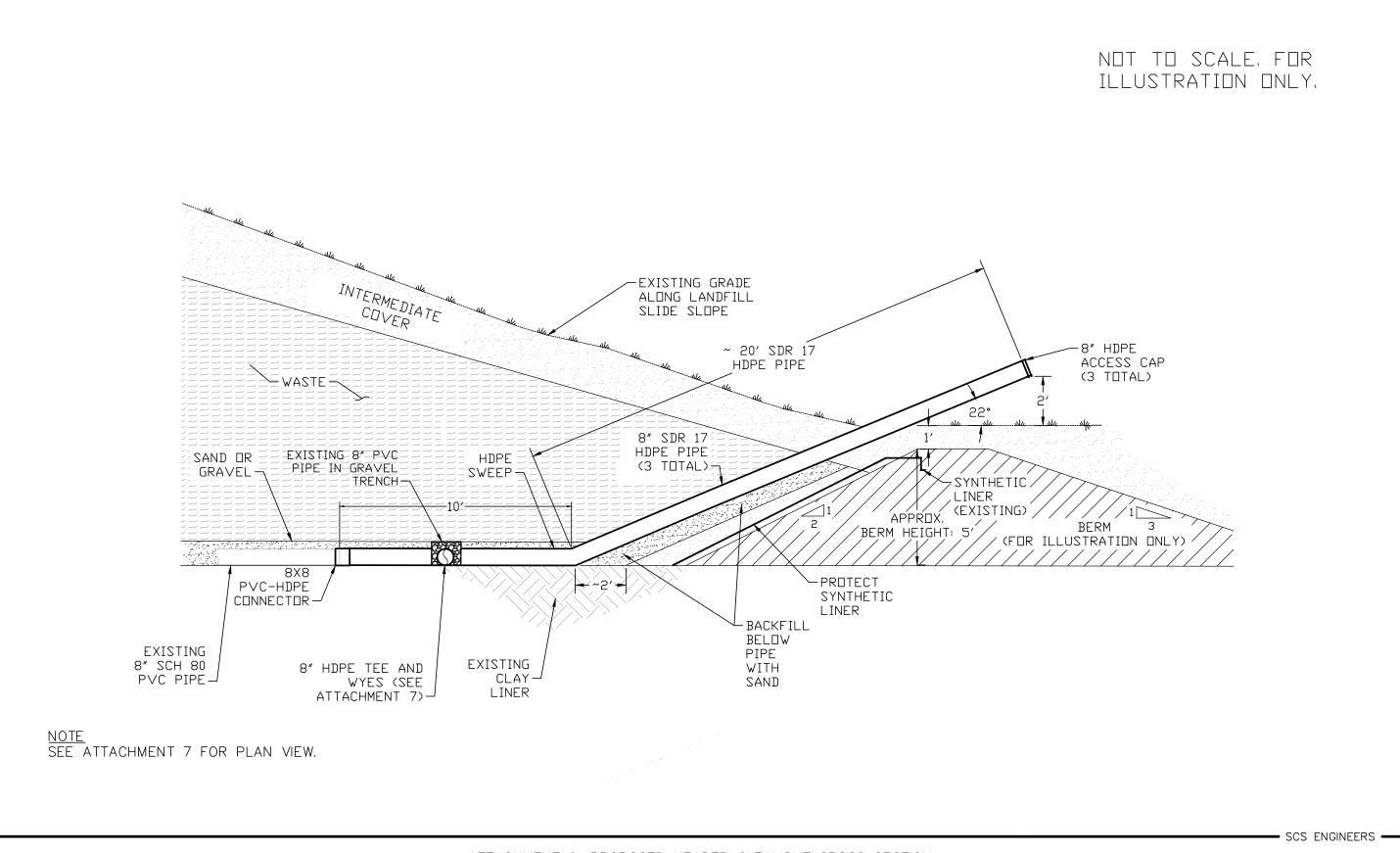
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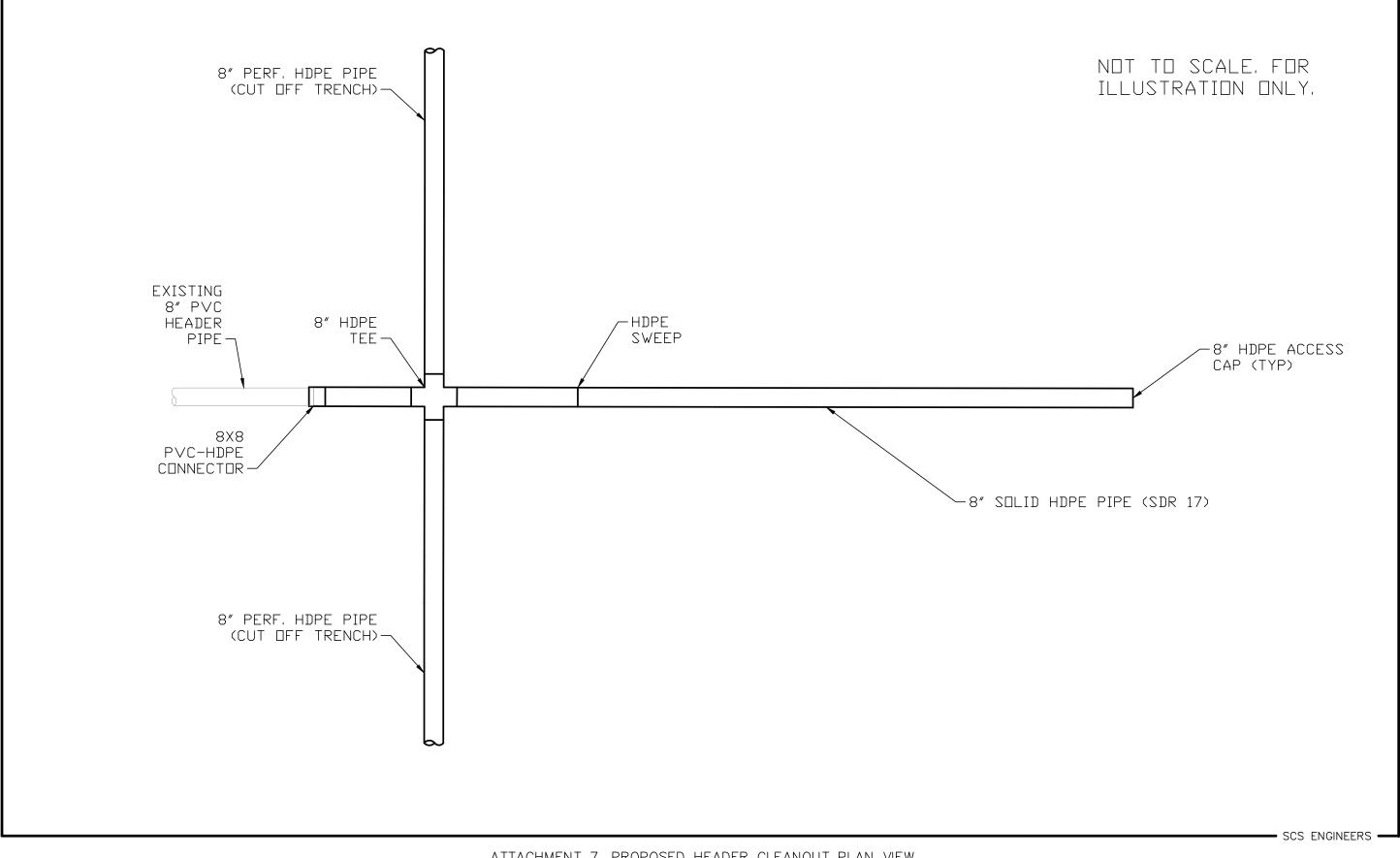
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ATTACHMENT 6. PROPOSED HEADER CLEANOUT CROSS SECTION SOUTHEAST COUNTY LANDFILL MAY 2017

DWG



ATTACHMENT 7. PROPOSED HEADER CLEANOUT PLAN VIEW SOUTHEAST COUNTY LANDFILL MAY 2017 Attachment 4 Schedule

				DEWATERING AND CORRECTIVE ACTION PLAN SOUTHEAST COUNTY LANDFILL - JUNE 26, 2017
7 Task Name	Duration	Start	Finish	lay '16 Jun '16 Jul '16 Aug '16 Sep '16 Oct '16 Nov '16 Dec '16 Jan '17 Feb '17 Mar '17 Apr '17 May '17 Jun '17 Jun '17 Aug '17 Sep '17 Oct '17 Nov '17 Dec '17 Jan '18 Feb '18 Mar '18 Apr '18 May '18 Jun '18 Jul '18 Aug '18 Sep '18 Sep '18 Sep '18 Sep '18 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '17 Sep '18 Sep '1
Action Plan for SCLF	1 day	Thu 3/9/17	Thu 3/9/17	2 0 5 5 5 3 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2 9 2
2 STAGE 1	300 days	Wed 6/1/16	Tue 7/25/17	·
Install All Piezometers (SB-01 through SB-25)	278 edays	Wed 6/1/16	Mon 3/6/17	
4 Install Shallow Groundwater Monitoring Well (TH-79)	7 days	Thu 12/1/16	Fri 12/9/16	
5 Dewater All LFG Wells	21 days	Thu 1/5/17	Wed 1/25/17	
6 Install CT-1, CT-2, CT-3, EW-44, EW-48 Pumps	10 days	Mon 2/27/17	Fri 3/10/17	
7 Install Temporary Well Point System	2 days	Mon 3/13/17	Tue 3/14/17	
8 Install Temp. Leachate Pump Station No. 2 (TPS-2)	3 days	Wed 3/8/17	Fri 3/10/17	
9 Phase I Cleanout Installation	5 days	Mon 3/13/17	Fri 3/17/17	
Jet Clean Leachate Collection System - Phase I	5 days	Mon 3/20/17	Fri 3/24/17	
Install 3 Shallow Groundwater Monitoring Wells (TH-80, TH-81,	5 days	Fri 3/10/17	Thu 3/16/17	
TH-82)				
2 Survey Wells, Sample and Test Water	8 days	Fri 3/17/17	Tue 3/28/17	
13 Provide Interim Status Report	90 days	Wed 3/22/17	Tue 7/25/17	
4 Submit Draft Corrective Action Plan to the FDEP	1 day	Sun 4/23/17	Sun 4/23/17	
5 Submit Revised Corrective Action Plan to FDEP	1 day	Tue 6/27/17	Tue 6/27/17	
16 STAGE 2	411 days	Mon 1/2/17	Tue 7/31/18	
Design Dewatering Wells (DW-1 and DW-2)	32 days	Fri 3/17/17	Mon 5/1/17	
Install Dewatering Wells (DW-1 & DW-2)/Start Pumping	365 edays	Sat 5/20/17	Sun 5/20/18	
9 Install Phase II Cutoff Trench and Begin Monitoring	365 edays	Mon 7/31/17	Tue 7/31/18	
20 Weekly Monitoring	141 days	Mon 1/2/17	Mon 7/17/17	
0 Install GCL Around Phase II Wellheads	3 days	Wed 7/19/17	Fri 7/21/17	
1 Install 2 LFG Extraction Well Dewatering Pumps (EW-38 & EW-66)70 edays	Thu 3/16/17	Thu 5/25/17	
52 STAGE 3	309 days	Mon 7/17/17	Thu 9/20/18	7/17
³³ Monthly Report Level Readings in All Piezometers	306 days	Thu 7/20/17	Thu 9/20/18	
⁵⁹ Review and Evaluate Project Performance Every 90 Days (Piezometers, Dewatering Wells, Trenches, and Other Points)	262 days	Mon 7/17/17	Tue 7/17/18	
Achieve Compliance Target	1 day	Wed 8/1/18	Wed 8/1/18	h h
75 STAGE 4	355 days	Mon 7/30/18	Sat 12/7/19	
76 Prepare Draft Final Dewatering Report	54 days	Wed 8/1/18	Mon 10/15/18	
77 County Review Report	7 days	Tue 10/16/18	Wed _'24/18	STAGES 1&2
78 Finalize Final Dewatering Report	13 days	Thu 10/25/18	Tue 11/6/18	Pumping Rate Pumping Rate
9 Provide Final Dewatering Report to the FDEP	0 days	Wed 11/7/18	Wed 11/7/18	= 3,300 GPD
0 Execute termination clauses for the Action Plan	1 day	Mon 7/30/18	Mon 7/30/18	
1 FDEP Review	30 edays	Wed 11/7/18	Fri 12/7/18	
2 Extended Monitoring	365 edays	Fri 12/7/18	Sat 12/7/19	

** Brown text are tasks that are completed. Black text are tasks to be completed. Durations labeled "edays" in blue indicate elapsed, calendar days. All other durations assume standard working days (M-F, 8hr).

8 | Oct 18 | Nov 18 | Dec 18 | Jan 19 | Feb 19 | Mar 19 | Apr 19 | May 19 | Jun 19 | Jul 19 | Jul 19 | Aug 19 | Sep 19 | Oct 19 | Nov 19 | Dec 19 S 23 S 7 IS 21 S 4 | S 18 S 2 IS 16S 30S 13S 27S 10S 24S 10S 24S 1 S 2 S 19 S 2 | S 16S 30S 14S 28S 11S 25 S 8 S 22 S 6 IS 20 S 3 S 17 S 1 S 1 S

