2016 First Semi-Annual Progress Report

Epic Savannah North Terminal
Savannah, Chatham County, Georgia
VRP #1440101197

Epic Midstream, LLC

3075 Breckinridge Blvd., Suite 470 Duluth Georgia 30096
089400 | Report No 1 | June 01 2016

2016 1st Semi-Annual Progress Report

Epic Savannah North Terminal
Savannah, Chatham County, Georgia
VRP #1440101197

I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by me or by a subordinate working under my direction.

John A. DiZinno, PE

Printed Name (Professional Engineer)

6/1/2016

Signature (Professional Engineer)

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1. Introduction

On behalf of Epic Midstream, LLC (Epic), GHD has prepared this semiannual progress report pursuant to the approved Voluntary Remediation Program (VRP) application for the Epic Savannah North Terminal located at 7 Foundation Drive, Savannah, Georgia (Site). A vicinity map for the Site is included as Figure 1. An aerial photograph of the Site obtained in 2016 is included as Figure 2. A layout of the Site in its current configuration is shown on Figure 3.

1.1 Background

The Epic Savannah North Terminal has been utilized for petroleum refining and storage activities since the early 1900s. Mexican Petroleum first developed the property as a petroleum refinery in 1929. The property was later acquired by American Oil Company (and later Amoco), which continued petroleum operations. In 1993, the property was acquired by CITGO Asphalt Refining (CITGO), and began asphalt refining operations until acquisition by NuStar Asphalt Refining, LLC in 2008. Asphalt refining operations were temporarily halted in 2012. The property was acquired by Axeon Specialty Products (Axeon) in 2014, which utilized the Site for bulk storage and distribution of petroleum related products. The property was most recently obtained by Epic in December 2015 and is currently used as a bulk storage and distribution facility for petroleum products.

In 1989, light non-aqueous phase liquid (LNAPL) was discovered at the Site and a subsequent investigation by Amoco concluded that detected LNAPL was the result of the "gradual accumulation of residual oil over several decades." Subsurface investigations and LNAPL recovery operations have been conducted in various capacities since the discovery of the release. Through subsurface investigations, the LNAPL present at the Site has been determined to be petroleum hydrocarbon based material.

In 1996, Horizontal Subsurface Systems, Inc. installed a 20-foot (ft) deep and approximately 1,500 ft long polyethylene (HDPE) poly wall at the Site along the Savannah River. The poly wall was positioned at the downgradient edge of the Site to prevent the migration of LNAPL to the Savannah River. Portions of the poly wall were excavated by Axeon in June and July of 2015. Upon inspection, the exposed sections of the poly wall did not show any signs of delamination, degradation, or deterioration. The installation of the poly wall has proved to be a success and an effective method of providing containment.

On August 8, 2015, a VRP application or Voluntary Investigation and Remediation Plan (VIRP) was submitted by Axeon to the Georgia Environmental Protection Division (GAEPD) for the Site. Following submittal of the VIRP, Terracon, on behalf of Axeon, performed additional investigation at the Site and the results were summarized in a Site Investigation Summary Report (SISR) submitted to Georgia EPD on September 15, 2015. Additionally, Langan Engineering and Environmental Services (Langan) evaluated the LNAPL at the Site and identified LNAPL recovery approaches for implementation at the Site that were described in a Technical Memorandum to Axeon that was submitted to Georgia EPD on October 29, 2015. The SISR and Langan Technical Memorandum were submitted to supplement the August 2015 VIRP.

In correspondence dated November 24, 2015, the Georgia EPD stated that the Site had been approved for participation in the VRP with comments and was assigned VRP #1440101197. The noted comments provided by EPD were addressed in a Site Investigation Summary Report No. 2

(SISR-No.2) submitted to Georgia EPD on December 15, 2015 or are addressed herein. Epic purchased the Site from Axeon on December 22, 2015 and on January 14, 2016 Epic submitted a revised VRP application and checklist to reflect the ownership change.

The existing monitoring well network at the Site as identified by GHD consists of 60 wells installed during previous environmental investigations that are shown on Figure 3. Historically, as many as 27 of these monitor wells have contained LNAPL, with 22 wells currently containing measurable LNAPL.

1.2 Report Overview

This report summarizes the findings from the following activities that were performed at the Site subsequent to the receipt of the VRP approval received from Georgia EPD on November 24, 2015:

- Transfer of ownership and selection of environmental consultant to lead the implementation of VRP compliance activities.
- Quarterly groundwater monitoring and LNAPL measuring performed in March and May 2016.
- Sampling of the on-Site water supply well performed in May 2016.
- Sampling of soil located along the suspected path of an abandoned tank roof drain system, performed in May 2016.
- Initiation of LNAPL recovery at the Site.

1.3 Georgia EPD VRP Approval Comments

The below comments were provided by Georgia EPD with associated responses:

Comment No. 1: *EPD concurs with the LNAPL recovery approach presented in the October 2015 Langan Technical Memorandum Report, which specifies the use of the following three (3) separate recovery systems in three (3) designated zones of the property: An MPE system, mobile skimmer pumps, and a mobile vacuum truck. Please initiate these recovery systems and present the details of the activities in the next progress report. Please also include a table of the extraction wells used during LNAPL recovery and include the total gallons of free product removed-to-date.*

> **Response:** LNAPL skimming was initiated at the Site as described in Section 2.5. As described in Section 2.1, Epic and GHD intend to complete an LNAPL Transmissivity Evaluation to determine the most appropriate LNAPL recovery approach for each designated zone at the Site. The results of the LNAPL Transmissivity Evaluation will be provided in the next semi-annual progress report.

Comment No. 2: *During the November 4, 2015 meeting with EPD, Mr. Bill Anderson with Terracon Consultants, Inc. discussed recent well installation, well replacement/repair, and groundwater sampling activities conducted on-site that had not been included in the VRP Application or supplementary data, particularly the over-drill of monitoring well AW-62 and the point of demonstration (POD) well installed near AW-62. Please provide the details, including monitoring well boring logs and sampling data, from the recent well installations and sampling activities in the next monitoring report.*

> **Response:** The requested information was submitted by Axeon/Terracon in the SISR-No.2 dated December 15, 2015 (included as Appendix A), with the exception of the groundwater

sampling data. AW-62 and POD-1 will be developed and sampled and the results will be reported in the next semi-annual progress report.

Comment No. 3: *The soil and groundwater data presented in the September 2015 Site Investigation Summary Report was primarily collected in close proximity to the subject property boundary. Additional soil characterization is warranted to ensure there is no ongoing source of the LNAPL contamination. Future soil and groundwater characterization may also be appropriate depending on the final VRP certification and risk reduction standards chosen.*

Response: In May 2016, GHD collected shallow soil samples from a depth of two feet in the vicinity of an abandoned subsurface line believed to be a part of the facility's tank roof stormwater collection system as described in Section 2.4. The abandoned line was identified by GAEPD as a potential source of ongoing LNAPL. The necessity of further soil characterization in the interior of the Site will be evaluated if observed Site conditions warrant additional investigation, e.g. conditions such as the observation of surface staining of soil or a change in the characteristics of recovered LNAPL that may suggest the presence of a less-weathered LNAPL indicative of a more recent release. Additional delineation of LNAPL may be performed in the future where warranted based on the findings from the LNAPL Transmissivity Evaluation underway at the Site.

Comment No. 4: *Table 3 of the October 2015 Langan Technical Memorandum depicts high concentrations of VOCs detected in the air exhaust emitted from vapor and groundwater extraction during pilot testing. As noted in the System Description of the report, an alternative vapor treatment to the proposed CatOx unit may be necessary in order to treat the high vapor concentrations expected during water and vapor extraction. Please closely monitor the vapor exhaust to ensure the treatment method is functioning properly.*

Response: High concentrations of VOCs were detected in the air exhaust during the short-term MPR pilot testing performed. Transmissivity testing is currently being performed in conjunction with LNAPL recovery by skimmer pumps. The transmissivity data will be used to assess the most effective method of LNAPL recovery for various wells at the Site. Aggressive removal methods that generate excessive quantities of groundwater and vapors relative to the volumes of LNAPL recovered may not be the most effective recovery methods for the Site. Once the recovery methods are confirmed, effective vapor treatment will be incorporated into the remedy, as appropriate.

Comment No. 5: *Section 3 .2 of the August 2015 VRP application specifies an on-site well that is reportedly only used for increasing the pressure in the lines during turnaround clean out and is not used for drinking water. Water was reportedly last withdrawn from the well in 2011. Although the well is screened within the upper Floridian aquifer at depths greater than 228 feet below ground surface, future soil and groundwater results may warrant samples be collected from the onsite well.*

Response: The on-Site water supply well was reportedly last operated in August 2013 (200 gallons withdrawn). On May 4, 2016, the well was activated and GHD collected a water sample for analysis and no analytes were reported above the laboratory reporting limit (Section 2.3).

Comment No. 6*: The site boundary depicted in Drawing GI of Appendix C in the October 2015 Langan Technical Memorandum Report is inaccurate and does not include the southwest portion of the property. Please ensure the site boundary is accurately depicted in all future figures.*

Response: The Site boundary is shown on Figure 1 and will be utilized for all future submittals.

2. Activities Completed During Reporting Period

2.1 Ownership Change and Contractor Selection

As described previously, Epic purchased the Site in December 2015 with notification to Georgia EPD in January 2016. Epic subsequently began a process to select an environmental consultant to implement the VRP. In March 2016, GHD was selected by Epic and an introductory teleconference call and discussion between Epic, GHD, and Georgia EPD was held on March 16, 2016. During the discussion, Epic and GHD presented a description of the initial activities to be performed that included:

- Complete two quarterly Site-wide LNAPL gauging events
- Complete sampling of the on-Site water supply well
- Complete selective soil sampling in the vicinity of an abandoned subsurface line
- Obtain three LNAPL skimmer systems and install them in wells containing greater than 3 inches of LNAPL to initiate an LNAPL transmissivity evaluation

The Langan Technical Memorandum proposed the implementation of three LNAPL recovery approaches at the site: skimming; mobile vacuum truck events; and installation of a fixed MPE system. It has been proposed that LNAPL transmissivity and the associated de minimis criteria of 0.1-0.8 ft^2/day proposed by the Interstate Technology Regulatory Council (ITRC) be used as the primary metric for LNAPL recovery at the Site. The ITRC de minimis LNAPL transmissivity range represents a magnitude of LNAPL recoverability at which the performance of LNAPL recovery is typically considered to be ineffective and unnecessary. In other words, continued LNAPL recovery is not deemed to be technically feasible at these levels since LNAPL mobility is considered to be negligible and therefore would not be expected to contribute to LNAPL migration. However, the Langan Technical Memorandum proposed LNAPL recovery be performed at numerous Site wells when only four wells appeared to have LNAPL transmissivities high enough that LNAPL recovery might be realistically expected to provide a benefit based on the estimates presented (i.e., most are already at or within the ITRC de minimis range). In addition, the effectiveness of potential LNAPL recovery techniques proposed in the Langan Technical Memorandum was based on very short-term pilot tests (duration limited due to inclement weather) that may indicate potential recovery rates that might only be sustained for very short periods of time. The scope or work described below will provide the basis for a more accurate estimation of potential LNAPL recovery rates and LNAPL transmissivity, as well as a more technically appropriate application of the ITRC de minimis criteria.

GHD proposed to complete an LNAPL transmissivity evaluation by implementing LNAPL skimming only at all Site wells exhibiting in-well LNAPL thicknesses greater than 0.33 feet for periods of two to three weeks. This would represent an assumed limit for screening for the presence of potentially mobile/recoverable LNAPL in general and a practical limit for the evaluation of LNAPL transmissivity specifically as per ASTM E2856-13 Standard Guide for Estimation of LNAPL Transmissivity. The LNAPL transmissivity estimates would be developed pursuant to the methodology contained in ASTM E2856-13 for skimming. This would allow a much more accurate evaluation of LNAPL mobility/recoverability (while recovering LNAPL) upon which to base the subsequent LNAPL

recovery/management strategy that may or may not include more aggressive techniques such as MPE. This initial approach will also avoid the potentially unnecessary application of aggressive hydraulic and pressure gradients to the subsurface through MPE that could draw LNAPL closer to the polywall (and may not capture it) that may not be mobile otherwise. This approach also prevents the potentially unnecessary emission of hydrocarbons to ambient air from the blower exhaust (i.e., even treated blower exhaust will emit hydrocarbons) while the realistic need/benefit of something similar to a MPE is more fully assessed.

GHD anticipates evaluating up to three wells at a time over a two to three week duration of skimming. For each set of three wells, GHD will install an LNAPL skimmer into each well and monitor the recovery rate of LNAPL over a period of two to three weeks. The recovery rate will be calculated and an LNAPL transmissivity value will be obtained for each well for comparison to the de minimis criteria recommended by the ITRC. Wells exhibiting LNAPL transmissivities that suggest LNAPL is mobile and recoverable will then be evaluated to determine the most appropriate LNAPL recovery approach to be implemented over the long-term.

Based on in-well LNAPL measurements obtained in March and May 2016, there are nineteen wells with over 0.33 feet of LNAPL present. Each well will be evaluated for LNAPL transmissivity and the results will be included in the next semiannual progress report.

2.2 Quarterly LNAPL Monitoring

2.2.1 March 2016 Gauging Event

Depth to water measurements were obtained on March 24, 2016 for 57 existing on-Site monitoring wells that were located and accessible during the event. The measurements were obtained using a Solinst oil/water interface probe and are summarized in Table 1. Groundwater elevations were determined based on the depth to groundwater measurements and adjusted for the measured in-well LNAPL thickness, where required. A groundwater potentiometric elevation and contour map based on the March 24, 2016 groundwater elevation data is shown on Figure 4 and indicates that the groundwater flow direction is generally to the east towards the Savannah River and is consistent with historical observations.

LNAPL was measured in 21 of 56 gauged wells during the March 2016 event as summarized in Table 1 with observed thicknesses between 0.10 feet and 8.93 feet. Figure 5 presents isopleths depicting the measured in-well LNAPL thicknesses for this event which are generally consistent with observations from recent events. No measurable LNAPL was observed on the river side of the polywall, including in recently re-installed wells AW-62 and POD-1.

2.2.2 May 2016 Gauging Event

Depth to water measurements were obtained on May 3, 2016 for 58 existing on-Site monitoring wells that were located and accessible during the event. The measurements were obtained using a Solinst oil/water interface probe and are summarized in Table 1. Groundwater elevations were determined as described above (Section 2.2.1). A groundwater potentiometric elevation and contour map based on the May 3, 2016 groundwater elevation data is shown on Figure 6 and indicates that the groundwater flow direction is generally to the east towards the Savannah River and is consistent with historical observations.

LNAPL was measured in 22 of 58 gauged wells during the May 2016 event as summarized in Table 1 with observed thicknesses between 0.01 feet and 9.98 feet. Figure 7 presents isopleths depicting the measured in-well LNAPL thicknesses for this event which are generally consistent with observations from recent events. No measurable LNAPL was observed on the river side of the polywall, including in recently re-installed wells AW-62 and POD-1.

2.3 May 2016 Water Supply Well Sampling

On May 4, 2016 GHD collected a groundwater sample from the facility's on-Site water supply well located near the truck loading rack as shown on Figure 3. The water supply well pump was activated and allowed to pump for approximately 15 minutes after which a sample was collected. GHD personnel donned clean nitrile gloves and the sample was collected in pre-cleaned, laboratory-supplied containers that were labeled and stored on ice pending delivery to Analytical Environmental Services, Inc. (AES) in Atlanta, Georgia. The sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and total RCRA metals. A field sample key and the analytical laboratory report for the groundwater sample are included in Appendix B.

The analytical results from the groundwater sample are summarized in Table 2. No analytes were detected at concentrations above the laboratory reporting limit.

2.4 May 2016 Soil Sampling

Based on discussions with GAEPD, an abandoned subsurface line, believed to be a tank roof drain collection line was identified that required the collection of soil samples. On May 4, 2016 GHD collected shallow soil samples from four locations believed to be along the path of the abandoned line with one sample collected adjacent to the exposed portion of the line as shown on Figure 8. Each sample was collected from a depth of two feet below grade using a pre-cleaned hand auger. GHD personnel donned clean nitrile gloves and the samples were collected in pre-cleaned, laboratory-supplied containers that were labeled and stored on ice pending delivery to AES in Atlanta, Georgia. The samples were analyzed for VOCs, SVOCs, and total RCRA metals. A field sample key and the analytical laboratory report for the groundwater sample are included in Appendix B.

The analytical results from the soil samples are summarized in Table 3 and are shown on Figure 8. The results indicate that none of the analytes detected are present in the soil at concentrations above the Type 3 Risk Reduction Standards (RRS).

2.5 Initiation of LNAPL Skimming

Based on the observations from the two LNAPL gauging events, 19 monitoring wells were identified for inclusion in the LNAPL Recovery and Transmissivity Evaluation to be completed. These 19 wells exhibited in-well LNAPL thicknesses of greater than 0.33 feet. Three mobile LNAPL skimming systems were procured and on May 17, 2016, the installation of skimmers in AW-65 and AW-68 was completed and LNAPL recovery was initiated.

Monitor well AW-9 was also prepared for skimmer installation, but due to heavy precipitation and the resultant presence of several feet of water within the tank berms, skimmer installation has not been completed at this time.

As of May 25, 2016, approximately eight and seven gallons of LNAPL were recovered from AW-65 and AW-68, respectively.

2.6 Conceptual Site Model

A preliminary CSM was submitted as a part of the VIRP. The CSM will be updated as additional data are collected during the progress of activities implemented overtime. It is anticipated that the CSM will be updated following the completion of the LNAPL Transmissivity Evaluation.

3. Proposed Remediation Activities

Continued LNAPL skimming

GHD will continue to sequentially complete two to three week duration LNAPL skimming events on the 17 remaining wells exhibiting in-well LNAPL thicknesses of greater than 0.33 feet. At the time of this report LNAPL skimming had been initiated in the first two wells (AW-65 and AW-68).

LNAPL Transmissivity Evaluation

Following the completion of the two to three week skimming event at each well, GHD will utilize the LNAPL recovery data to calculate LNAPL transmissivity values. The duration of the LNAPL skimmer recovery will provide a transmissivity value that is representative of long-term LNAPL recovery rates that will be far more reliable than those previously developed for the Site. The LNAPL transmissivity will be calculated using methodologies developed by ITRC for the evaluation of LNAPL mobility. The findings from the LNAPL Transmissivity Evaluation will be summarized in the next progress report.

Identification of Appropriate LNAPL Recovery Approach for Each Well

As described above, an LNAPL transmissivity evaluation will be completed and will provide a reliable basis for selection of specific LNAPL recovery approaches. The LNAPL transmissivity evaluation will identify wells with LNAPL transmissivity values greater than the ITRC de minimis criteria of 0.1 – 0.8 ft^2/day and a specific remedial approach will be developed for each well. Potential remedies will be determined based on the proximity to receptors, site conditions and site logistics / infrastructure.

Quarterly LNAPL gauging

GHD will continue to visit the Site on a quarterly basis to complete measurements of groundwater elevations and in-well LNAPL thickness. The measured LNAPL thicknesses will be reviewed and any wells requiring addition or removal from the LNAPL skimming and transmissivity program will be identified.

On-Site Horizontal/Vertical Delineation

Epic and GHD will evaluate the need for additional soil and/or groundwater sampling in the interior of the Site. Any sampling performed will be restricted to ensuring there is no on-going source of LNAPL contamination at the Site.

Recently reinstalled monitor well AW-62 and new well POD-1 will also be purged and sampled.

Vapor Intrusion Pathway Evaluation

Epic will evaluate the potential for vapor intrusion at the Site using existing soil and groundwater data. Data will be imported into the USEPA Vapor Intrusion Screening Level calculator or into other screening tools to evaluate potential risk and based on initial results, the data may be evaluated further using commonly accepted tools, if warranted.

4. Commitment to Future Requirements

Epic affirms its commitment to the following future requirements:

- Progress Reports – June 1st and December 1st through 2020
- September 1, 2016 – demonstrate complete horizontal and vertical delineation on-Site
- September 1, 2017 – demonstrate complete horizontal and vertical delineation of off-Site properties
- September 1, 2016 – complete vapor intrusion pathway evaluation
- March 2, 2018 – update the CSM and prepare final remediation plan
- March 31, 2021 – submit CSR upon completion of remedial activities proposed herein

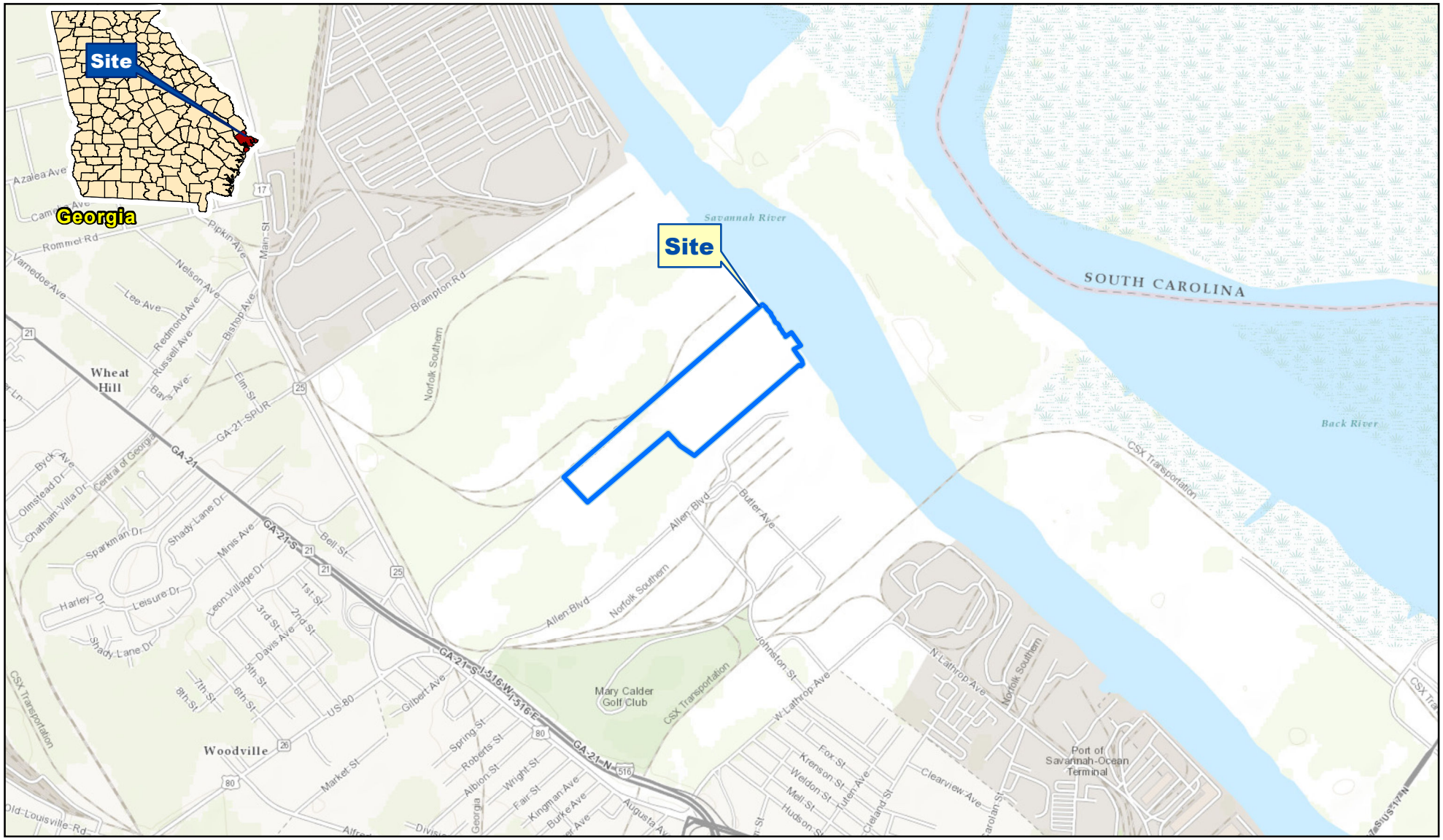
5. Project Schedule

The anticipated milestone schedule for the June 1 to December 1, 2016 reporting period is provided in Table 4.

6. Engineering Fees

Appendix C includes the summary of engineering fees incurred by this project from March 7, 2016 through May 22, 2016.

Figures



Source: 2013 National Agriculture Imagery Program (NAIP), provided by ESRI.

0 1,000 2,000
Feet

Coordinate System:
NAD 1983 UTM Zone 17N

N

GHD

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

May 25, 2016

VICINITY MAP

FIGURE 1

GIS File: J:\GIS\Client Project Data Library\Epic Midstream, LLC\Savannah North Terminal, Georgia\Vicinity Map\Epic Savannah North Terminal - Vicinity Map.mxd

Source: Aerial Photograph provided by Epic Midstream, LLC on March 17, 2016.

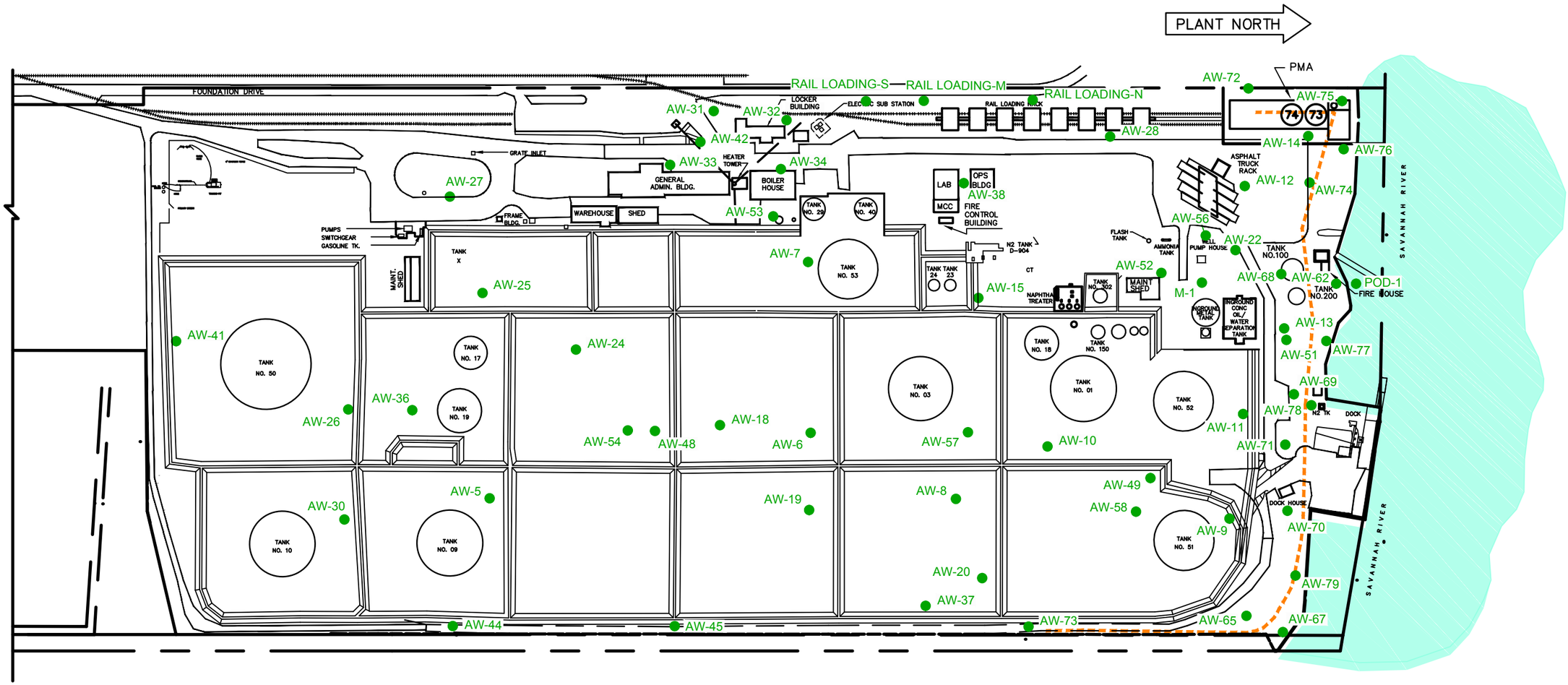
EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
May 9, 2016

2016 AERIAL PHOTOGRAPH

FIGURE 2

GIS File: J:\GIS\Projects\89000s\89400\89400-00(001)PR\89400-00(001)PR-BR001 2016 Aerial Photograph.mxd



0 100 200ft

LEGEND

POLYWALL BARRIER

AW-52 WELL LOCATION

GHD

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00

Jun 1, 2016

SITE PLAN

FIGURE 3

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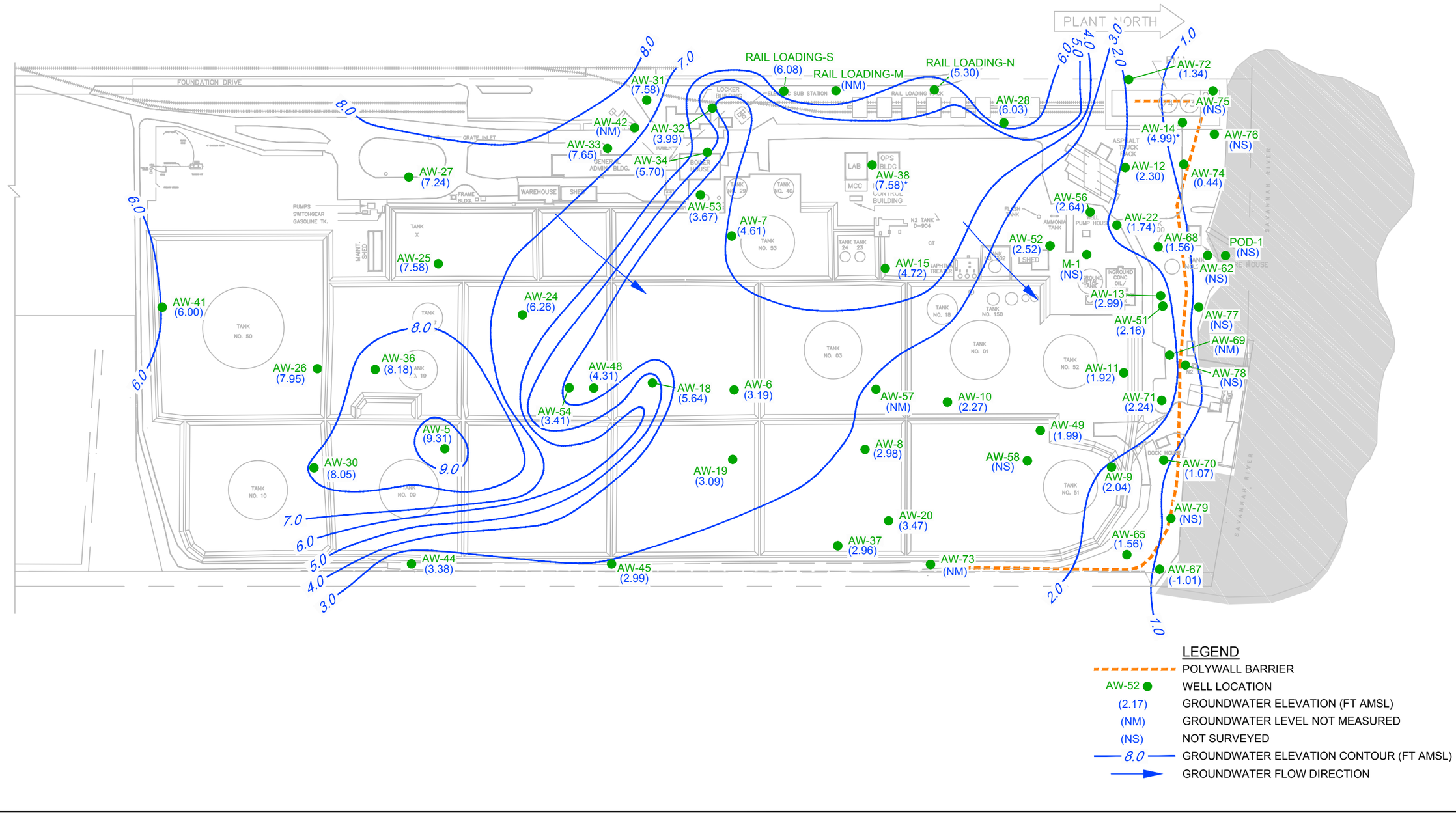

0 100 200ft

NOTE:

* THE GROUNDWATER ELEVATIONS FROM AW-14 AND AW-38 WERE NOT USED TO DEVELOP CONTOURS.

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
Jun 1, 2016

MARCH 2016 GROUNDWATER ELEVATION CONTOURS

FIGURE 4

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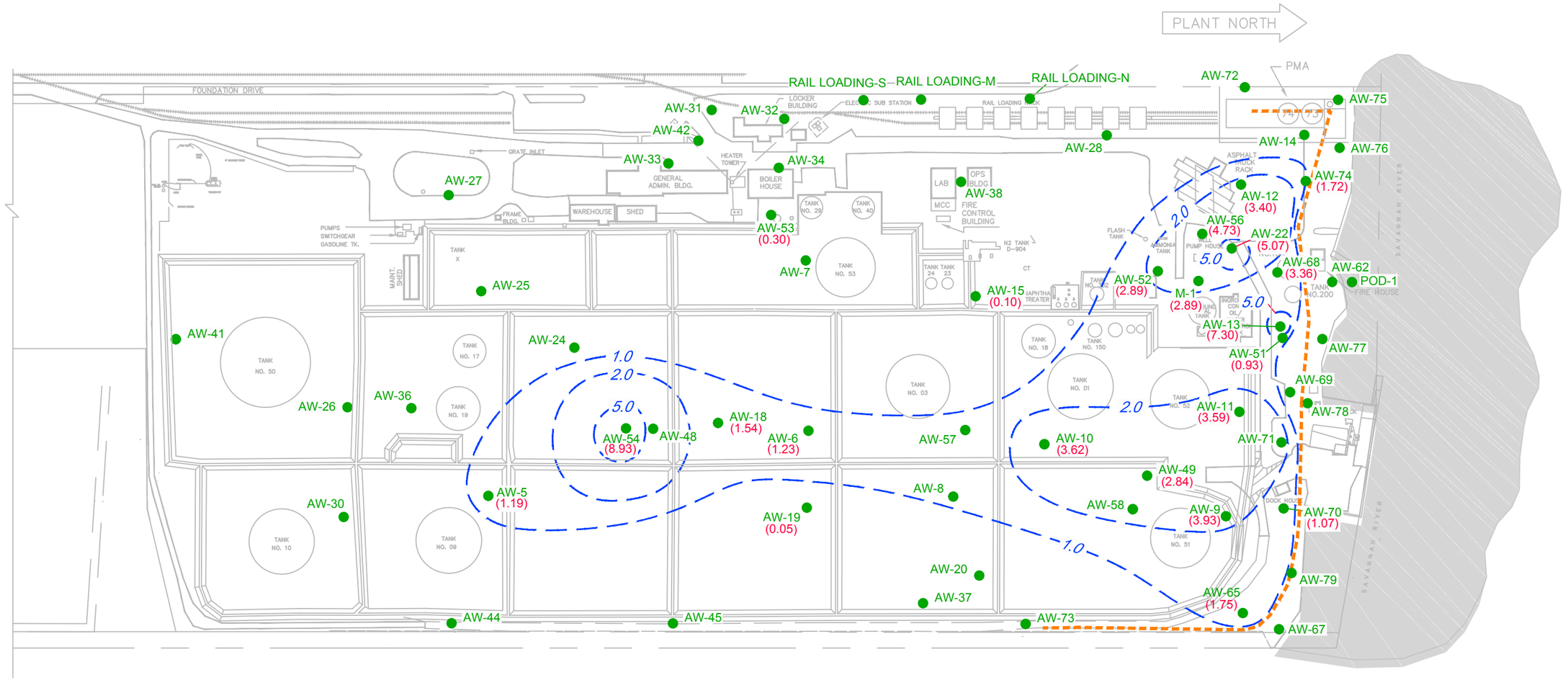

LEGEND

- POLYWALL BARRIER
- AW-52 WELL LOCATION
- (1.75) LNAPL THICKNESS (FT)
- 1.0 LNAPL THICKNESS ISOPLETH (FT)

0 100 200ft

NOTE: SPECIFIC GRAVITY OF 0.854 USED TO CORRECT FOR LNAPL THICKNESS, EXCEPT FOR AW-12, AW-13, AW-51, AW-65, AND AW-68, WHICH USED WELL-SPECIFIC VALUES.

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
Jun 1, 2016

MARCH 2016 LNAPL THICKNESS ISOPLETH

FIGURE 5

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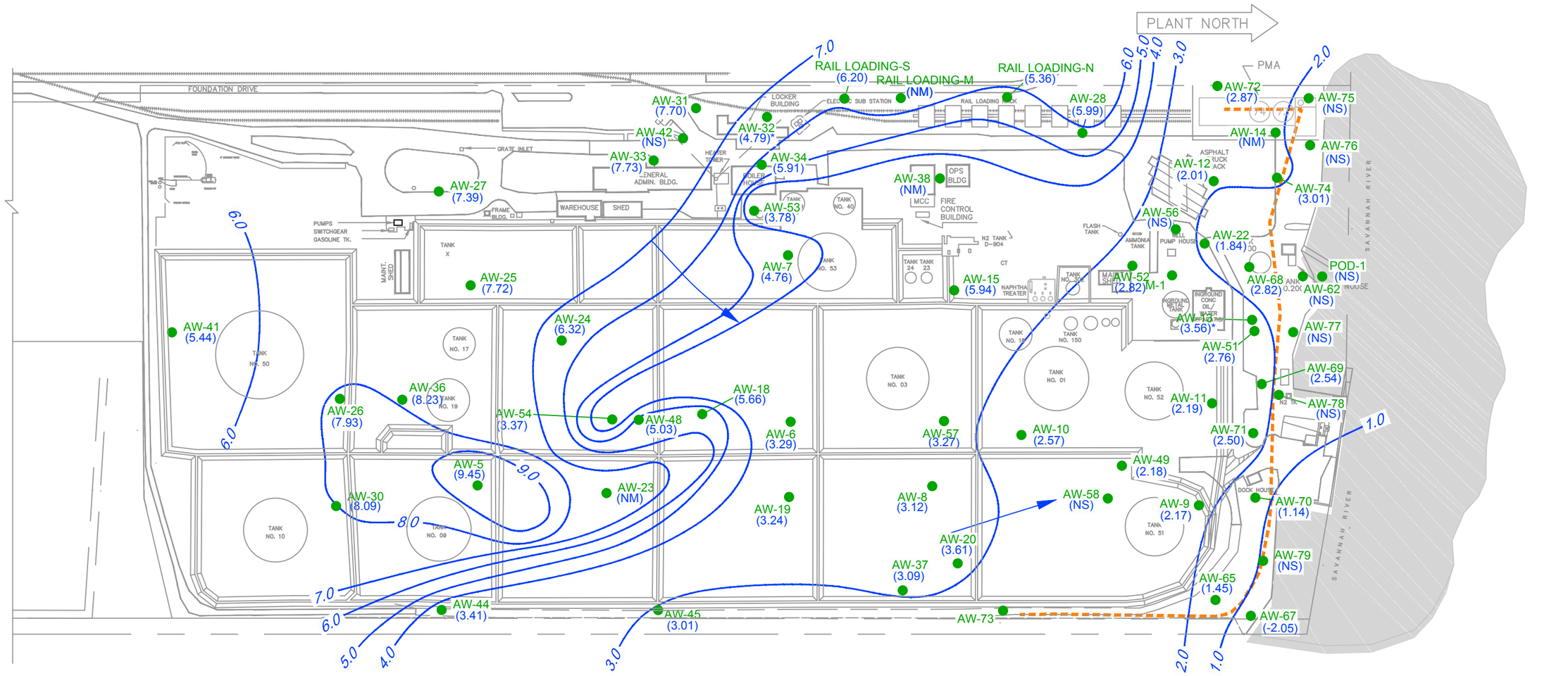

LEGEND

- POLYWALL BARRIER
- AW-52 ● WELL LOCATION
- (2.17) GROUNDWATER ELEVATION (FT AMSL)
- (NM) GROUNDWATER LEVEL NOT MEASURED
- (NS) NOT SURVEYED
- 8.0 GROUNDWATER ELEVATION CONTOUR (FT AMSL)
- → GROUNDWATER FLOW DIRECTION

0 100 200ft

NOTE:

* THE GROUNDWATER ELEVATIONS FROM AW-13, AW-22, AND AW-32 WERE NOT USED TO DEVELOP CONTOURS.

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
Jun 1, 2016

MAY 2016 GROUNDWATER ELEVATION CONTOURS

FIGURE 6

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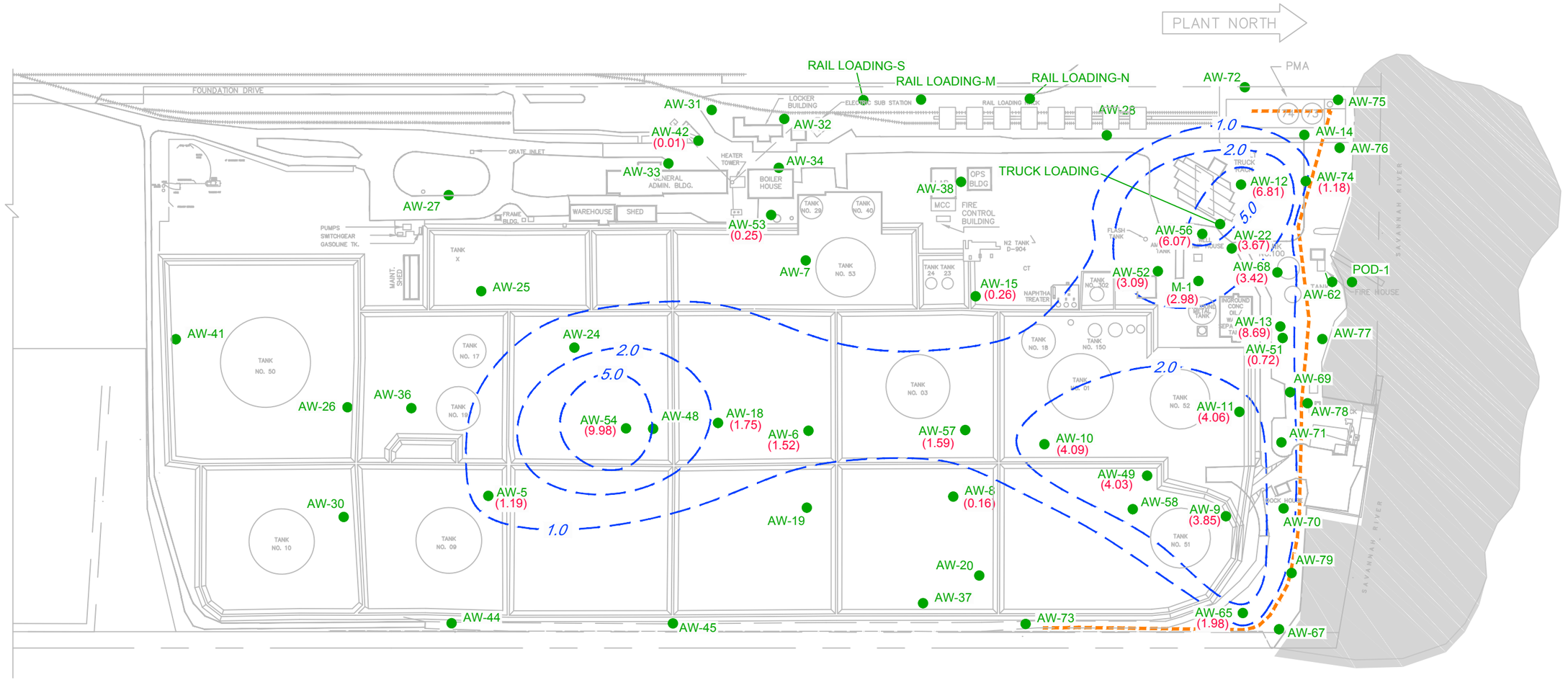

LEGEND

- POLYWALL BARRIER
- AW-52 — WELL LOCATION
- (9.98) — LNAPL THICKNESS (FT)
- 1.0 — LNAPL THICKNESS ISOPLETH (FT)

0 100 200ft

NOTE: SPECIFIC GRAVITY OF 0.854 USED TO CORRECT FOR LNAPL THICKNESS, EXCEPT FOR AW-12, AW-13, AW-51, AW-65, AND AW-68, WHICH USED WELL-SPECIFIC VALUES.

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
Jun 1, 2016

MAY 2016 LNAPL THICKNESS ISOPLETH

FIGURE 7

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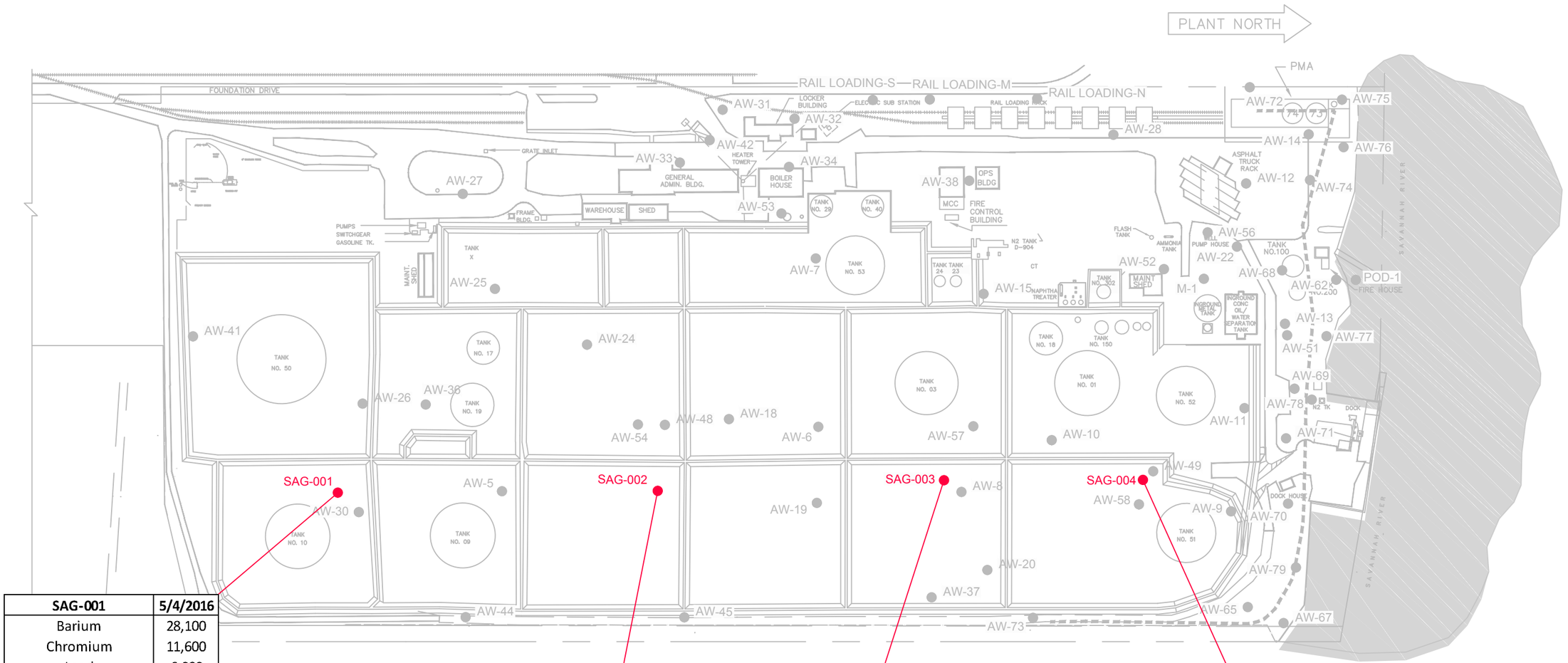

SAG-001	5/4/2016
Barium	28,100
Chromium	11,600
Lead	6,090
2-Methylnapthalene	1500
Fluorene	1100
Phenanthrene	3100
Acetone	170J
Isopropyl benzene	120J
m&p-Xylenes	3.6J
Methyl cyclohexane	520
o-Xylene	16J

SAG-002	5/4/2016
Barium	26,400
Chromium	13,000
Lead	16,500
Fluorene	1900
Acetone	92
Isopropyl benzene	15
Methyl cyclohexane	16

SAG-003	5/4/2016
Barium	17,400
Chromium	3,650
Lead	6,230

SAG-004	5/4/2016
Barium	14,900
Methyl cyclohexane	5.1

NOTES:

1. ALL RESULTS ARE SHOWN IN µg/kg.
2. ONLY REPORTED DETECTIONS ARE SHOWN.
3. NO CRITERIA EXCEEDANCES REPORTED.
4. J = ESTIMATED VALUE

0 100 200ft

LEGEND

POLYWALL BARRIER

AW-52 WELL LOCATION

SAG-001 SOIL SAMPLE LOCATION

EPIC MIDSTREAM, LLC
EPIC SAVANNAH NORTH TERMINAL, 7 FOUNDATION DRIVE, SAVANNAH, GEORGIA

089400-00
Jun 1, 2016

MAY 2016 SOIL SAMPLE LOCATIONS

FIGURE 8

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Tables

Table 1

Groundwater Elevation and LNAPL Thickness Data - March and May 2016
Epic Midstream, LLC
Savannah, Georgia
VRP #1440101197

Location ID	*Measurement Date*	*Depth to LNAPL (ft btoc)*	*Depth to Water (ft btoc)*	*Groundwater Elevation (ft AMSL)*	*LNAPL Thickness (ft)*
AW-5	3/1/2016	6.56	7.75	9.31	1.19
	5/1/2016	6.42	7.61	9.45	1.19
AW-6	3/1/2016	8.20	9.43	3.19	1.23
	5/1/2016	8.06	9.58	3.29	1.52
AW-7	3/1/2016	--	7.93	4.61	--
	5/1/2016	--	7.78	4.76	--
AW-8	3/1/2016	--	12.70	2.98	--
	5/1/2016	12.54	12.70	3.12	0.16
AW-9	3/1/2016	10.89	14.82	2.04	3.93
	5/1/2016	10.77	14.62	2.17	3.85
AW-10	3/1/2016	11.10	14.72	2.27	3.62
	5/1/2016	10.73	14.82	2.57	4.09
AW-11	3/1/2016	11.20	14.79	1.92	3.59
	5/1/2016	10.86	14.92	2.19	4.06
AW-12	3/1/2016	9.25	12.65	2.30	3.40
	5/1/2016	8.96	15.77	2.01	6.81
AW-13	3/1/2016	10.40	17.70	2.99	7.30
	5/1/2016	9.95	18.64	3.56	8.69
AW-14	3/1/2016	--	8.52	4.99	--
	5/1/2016	Not Measured			
AW-15	3/1/2016	10.65	10.75	4.72	0.10
	5/1/2016	9.40	9.66	5.94	0.26
AW-18	3/1/2016	7.06	8.60	5.64	1.54
	5/1/2016	7.00	8.75	5.66	1.75
AW-19	3/1/2016	12.40	12.45	3.09	0.05
	5/1/2016	--	12.26	3.24	--
AW-20	3/1/2016	--	12.20	3.47	--
	5/1/2016	--	12.06	3.61	--
AW-22	3/1/2016	12.65	17.72	1.74	5.07
	5/1/2016	12.75	16.42	1.84	3.67
AW-24	3/1/2016	--	5.10	6.26	--
	5/1/2016	--	5.04	6.32	--
AW-25	3/1/2016	--	5.92	7.58	--
	5/1/2016	--	5.78	7.72	--
AW-26	3/1/2016	--	4.52	7.95	--
	5/1/2016	--	4.54	7.93	--
AW-27	3/1/2016	--	6.28	7.24	--
	5/1/2016	--	6.13	7.39	--
AW-28	3/1/2016	--	5.15	6.03	--
	5/1/2016	--	5.19	5.99	--
AW-30	3/1/2016	--	5.35	8.05	--
	5/1/2016	--	5.31	8.09	--
AW-31	3/1/2016	--	2.72	7.58	--
	5/1/2016	--	2.60	7.70	--
AW-32	3/1/2016	--	10.40	3.99	--
	5/1/2016	--	9.60	4.79	--
AW-33	3/1/2016	--	5.43	7.65	--
	5/1/2016	--	5.35	7.73	--
AW-34	3/1/2016	--	7.57	5.70	--
	5/1/2016	--	7.36	5.91	--

Table 1

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Location ID	*Measurement Date*	*Depth to LNAPL (ft btoc)*	*Depth to Water (ft btoc)*	*Groundwater Elevation (ft AMSL)*	*LNAPL Thickness (ft)*
AW-36	3/1/2016	--	5.47	8.18	--
	5/1/2016	--	5.42	8.23	--
AW-37	3/1/2016	--	11.37	2.96	--
	5/1/2016	--	11.24	3.09	--
AW-38	3/1/2016	--	4.45	7.58	--
	5/1/2016	Not Measured			
AW-41	3/1/2016	--	9.15	6.00	--
	5/1/2016	--	9.71	5.44	--
AW-42	3/1/2016	Not Measured			
	5/1/2016	1.69	1.70	7.74	0.01
AW-44	3/1/2016	--	10.03	3.38	--
	5/1/2016	--	10.00	3.41	--
AW-45	3/1/2016	--	12.14	2.99	--
	5/1/2016	--	12.12	3.01	--
AW-48	3/1/2016	--	6.82	4.31	--
	5/1/2016	--	6.10	5.03	--
AW-49	3/1/2016	13.10	15.94	1.99	2.84
	5/1/2016	12.73	16.76	2.18	4.03
AW-51	3/1/2016	10.48	11.41	2.16	0.93
	5/1/2016	9.90	10.62	2.76	0.72
AW-52	3/1/2016	12.80	15.69	2.52	2.89
	5/1/2016	12.47	15.56	2.82	3.09
AW-53	3/1/2016	6.62	6.92	3.67	0.30
	5/1/2016	6.51	6.76	3.78	0.25
AW-54	3/1/2016	5.95	14.88	3.41	8.93
	5/1/2016	5.83	15.81	3.37	9.98
AW-56	3/1/2016	9.32	14.05	2.64	4.73
	5/1/2016	8.48	14.55	3.28	6.07
AW-57	3/1/2016	Not Measured			
	5/1/2016	8.64	10.23	3.27	1.59
AW-58	3/1/2016	--	8.61	NS	--
	5/1/2016	--	8.51	NS	--
AW-62	3/1/2016	--	9.24	NS	--
	5/1/2016	--	10.60	NS	--
AW-65	3/1/2016	11.45	13.20	1.56	1.75
	5/1/2016	11.53	13.51	1.45	1.98
AW-67	3/1/2016	--	12.33	-1.01	--
	5/1/2016	--	13.37	-2.05	--
AW-68	3/1/2016	11.75	15.11	1.56	3.36
	5/1/2016	10.48	13.90	2.82	3.42
AW-69	3/1/2016	Not Measured			
	5/1/2016	--	6.90	2.54	--

Table 1

Groundwater Elevation and LNAPL Thickness Data - March and May 2016
Epic Midstream, LLC
Savannah, Georgia
VRP #1440101197

Location ID	*Measurement Date*	*Depth to LNAPL (ft btoc)*	*Depth to Water (ft btoc)*	*Groundwater Elevation (ft AMSL)*	*LNAPL Thickness (ft)*
AW-70	3/1/2016	--	11.18	1.07	--
	5/1/2016	--	11.11	1.14	--
AW-71	3/1/2016	--	11.05	2.24	--
	5/1/2016	--	10.79	2.50	--
AW-72	3/1/2016	--	8.78	1.34	--
	5/1/2016	--	7.25	2.87	--
AW-74	3/1/2016	9.27	10.99	0.44	1.72
	5/1/2016	6.78	7.96	3.01	1.18
AW-75	3/1/2016	--	11.04	NS	--
	5/1/2016	--	6.57	NS	--
AW-76	3/1/2016	--	13.61	NS	--
	5/1/2016	--	14.07	NS	--
AW-77	3/1/2016	--	7.91	NS	--
	5/1/2016	--	9.59	NS	--
AW-78	3/1/2016	--	6.91	NS	--
	5/1/2016	--	6.77	NS	--
AW-79	3/1/2016	--	10.95	NS	--
	5/1/2016	--	11.03	NS	--
RAIL LOADING - N	3/1/2016	--	7.31	5.30	--
	5/1/2016	--	7.25	5.36	--
RAIL LOADING - S	3/1/2016	--	6.22	6.08	--
	5/1/2016	--	6.10	6.20	--
RAIL LOADING - M	3/1/2016	Damaged Casing			
	5/1/2016	Damaged Casing			
M - 1	3/1/2016	9.95	12.84	NS	2.89
	5/1/2016	9.65	12.63	NS	2.98
POD - 1	3/1/2016	--	11.60	NS	--
	5/1/2016	--	12.04	NS	--

Notes:
Dash (--) indicates not applicable
NS = Not Surveyed
ft btoc = feet below top of casing
ft AMSL = feet above mean sea level

Table 2

Groundwater Analytical Data (May 2016)
Epic Midstream LLC
Savannah, Georgia
VRP #1440101197

Sample Location:		***Well Water House Pump***
Sample ID:		***089400-050416-SAG-005***
Sample Date:		***5/4/2016***
Parameters	***Units***	
Metals		
Arsenic	mg/L	0.0500 U
Barium	mg/L	0.0200 U
Cadmium	mg/L	0.0050 U
Chromium	mg/L	0.0100 U
Lead	mg/L	0.0100 U
Mercury	mg/L	0.00020 U
Selenium	mg/L	0.0200 U
Silver	mg/L	0.0100 U
SVOCs		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	10 U
2,4,5-Trichlorophenol	ug/L	25 U
2,4,6-Trichlorophenol	ug/L	10 U
2,4-Dichlorophenol	ug/L	10 U
2,4-Dimethylphenol	ug/L	10 U
2,4-Dinitrophenol	ug/L	25 U
2,4-Dinitrotoluene	ug/L	10 U
2,6-Dinitrotoluene	ug/L	10 U
2-Chloronaphthalene	ug/L	10 U
2-Chlorophenol	ug/L	10 U
2-Methylnaphthalene	ug/L	10 U
2-Methylphenol	ug/L	10 U
2-Nitroaniline	ug/L	25 U
2-Nitrophenol	ug/L	10 U
3,3'-Dichlorobenzidine	ug/L	10 U
3-Nitroaniline	ug/L	25 U
4,6-Dinitro-2-methylphenol	ug/L	25 U
4-Bromophenyl phenyl ether	ug/L	10 U
4-Chloro-3-methylphenol	ug/L	10 U
4-Chloroaniline	ug/L	10 U
4-Chlorophenyl phenyl ether	ug/L	10 U
4-Methylphenol	ug/L	10 U
4-Nitroaniline	ug/L	25 U
4-Nitrophenol	ug/L	25 U

Table 2

Groundwater Analytical Data (May 2016)
Epic Midstream LLC
Savannah, Georgia
VRP #1440101197

Sample Location:		***Well Water House Pump***
Sample ID:		***089400-050416-SAG-005***
Sample Date:		***5/4/2016***
Parameters	***Units***	
SVOCs continued		
Acenaphthene	ug/L	10 U
Acenaphthylene	ug/L	10 U
Acetophenone	ug/L	10 U
Anthracene	ug/L	10 U
Atrazine	ug/L	10 U
Benzaldehyde	ug/L	10 U
Benzo(a)anthracene	ug/L	10 U
Benzo(a)pyrene	ug/L	10 U
Benzo(b)fluoranthene	ug/L	10 U
Benzo(g,h,i)perylene	ug/L	10 U
Benzo(k)fluoranthene	ug/L	10 U
Biphenyl (1,1-Biphenyl)	ug/L	10 U
bis(2-Chloroethoxy)methane	ug/L	10 U
bis(2-Chloroethyl)ether	ug/L	10 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	10 U
Butyl benzylphthalate (BBP)	ug/L	10 U
Caprolactam	ug/L	10 U
Carbazole	ug/L	10 U
Chrysene	ug/L	10 U
Dibenz(a,h)anthracene	ug/L	10 U
Dibenzofuran	ug/L	10 U
Diethyl phthalate	ug/L	10 U
Dimethyl phthalate	ug/L	10 U
Di-n-butylphthalate (DBP)	ug/L	10 U
Di-n-octyl phthalate (DnOP)	ug/L	10 U
Fluoranthene	ug/L	10 U
Fluorene	ug/L	10 U
Hexachlorobenzene	ug/L	10 U
Hexachlorobutadiene	ug/L	10 U
Hexachlorocyclopentadiene	ug/L	10 U
Hexachloroethane	ug/L	10 U
Indeno(1,2,3-cd)pyrene	ug/L	10 U
Isophorone	ug/L	10 U
Naphthalene	ug/L	10 U
Nitrobenzene	ug/L	10 U
N-Nitrosodi-n-propylamine	ug/L	10 U
N-Nitrosodiphenylamine	ug/L	10 U
Pentachlorophenol	ug/L	25 U
Phenanthrene	ug/L	10 U
Phenol	ug/L	10 UJ
Pyrene	ug/L	10 U

Table 2

Groundwater Analytical Data (May 2016)
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Savannah, Georgia
VRP #1440101197

Sample Location:		***Well Water House Pump***
Sample ID:		***089400-050416-SAG-005***
Sample Date:		***5/4/2016***
Parameters	***Units***	
VOCs		
1,1,1-Trichloroethane	ug/L	5.0 U
1,1,2,2-Tetrachloroethane	ug/L	5.0 U
1,1,2-Trichloroethane	ug/L	5.0 U
1,1-Dichloroethane	ug/L	5.0 U
1,1-Dichloroethene	ug/L	5.0 U
1,2,4-Trichlorobenzene	ug/L	5.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	5.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	5.0 U
1,2-Dichlorobenzene	ug/L	5.0 U
1,2-Dichloroethane	ug/L	5.0 U
1,2-Dichloropropane	ug/L	5.0 U
1,3-Dichlorobenzene	ug/L	5.0 U
1,4-Dichlorobenzene	ug/L	5.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	50 U
2-Hexanone	ug/L	10 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	10 U
Acetone	ug/L	50 U
Benzene	ug/L	5.0 U
Bromodichloromethane	ug/L	5.0 U
Bromoform	ug/L	5.0 U
Bromomethane (Methyl bromide)	ug/L	5.0 U
Carbon disulfide	ug/L	5.0 U
Carbon tetrachloride	ug/L	5.0 U
Chlorobenzene	ug/L	5.0 U
Chloroethane	ug/L	10 U
Chloroform (Trichloromethane)	ug/L	5.0 U
Chloromethane (Methyl chloride)	ug/L	10 U
cis-1,2-Dichloroethene	ug/L	5.0 U
cis-1,3-Dichloropropene	ug/L	5.0 U
Cyclohexane	ug/L	5.0 U
Dibromochloromethane	ug/L	5.0 U
Dichlorodifluoromethane (CFC-12)	ug/L	10 U
Ethylbenzene	ug/L	5.0 U
Isopropyl benzene	ug/L	5.0 U
m&p-Xylenes	ug/L	5.0 U
Methyl acetate	ug/L	5.0 U
Methyl cyclohexane	ug/L	5.0 U
Methyl tert butyl ether (MTBE)	ug/L	5.0 U
Methylene chloride	ug/L	5.0 U
o-Xylene	ug/L	5.0 U
Styrene	ug/L	5.0 U
Tetrachloroethene	ug/L	5.0 U
Toluene	ug/L	5.0 U
trans-1,2-Dichloroethene	ug/L	5.0 U
trans-1,3-Dichloropropene	ug/L	5.0 U
Trichloroethene	ug/L	5.0 U
Trichlorofluoromethane (CFC-11)	ug/L	5.0 U
Trifluorotrichloroethane (CFC-113)	ug/L	10 U
Vinyl chloride	ug/L	2.0 U

Footnotes:
U - Not detected at the associated value
J - estimated concentration

Table 3

Soil Analytical Data (May 2016)
Epic Midstream LLC
Savannah, Georgia
VRP #1440101197

Sample Location:			***SAG-001***	***SAG-002***	***SAG-003***	***SAG-004***
Sample ID:			***089400-050416-SAG-001***	***089400-050416-SAG-002***	***089400-050416-SAG-003***	***089400-050416-SAG-004***
Sample Date:			***5/4/2016***	***5/4/2016***	***5/4/2016***	***5/4/2016***
Sample Depth:			***(2-) ft BGS***	***(2-) ft BGS***	***(2-) ft BGS***	***(2-) ft BGS***
Parameters	***Units***	***Type 3 RRS***				
Metals						
Arsenic	ug/kg	41000	5830 U	5900 U	5660 U	5470 U
Barium	ug/kg	1000000	28100	26400	17400	14900
Cadmium	ug/kg	39000	2910 U	2950 U	2830 U	2740 U
Chromium	ug/kg	--	11600	13000	3650	2740 U
Lead	ug/kg	400000	6090	16500	6230	5470 U
Mercury	ug/kg	17000	113 U	108 U	107 U	95.5 U
Selenium	ug/kg	36000	5830 U	5900 U	5660 U	5470 U
Silver	ug/kg	10000	2910 U	2950 U	2830 U	2740 U
SVOCs						
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/kg	--	590 U	400 U	380 U	370 U
2,4,5-Trichlorophenol	ug/kg	400000	3000 U	2000 U	2000 U	1900 U
2,4,6-Trichlorophenol	ug/kg	3000	590 U	400 U	380 U	370 U
2,4-Dichlorophenol	ug/kg	2000	590 U	400 U	380 U	370 U
2,4-Dimethylphenol	ug/kg	--	590 U	400 U	380 U	370 U
2,4-Dinitrophenol	ug/kg	7000	3000 U	2000 U	2000 U	1900 U
2,4-Dinitrotoluene	ug/kg	1000	590 U	400 U	380 U	370 U
2,6-Dinitrotoluene	ug/kg	--	590 U	400 U	380 U	370 U
2-Chloronaphthalene	ug/kg	--	590 U	400 U	380 U	370 U
2-Chlorophenol	ug/kg	4000	590 U	400 U	380 U	370 U
2-Methylnaphthalene	ug/kg	--	1500	400 U	380 U	370 U
2-Methylphenol	ug/kg	3800	590 U	400 U	380 U	370 U
2-Nitroaniline	ug/kg	--	3000 U	2000 U	2000 U	1900 U
2-Nitrophenol	ug/kg	1000000	590 U	400 U	380 U	370 U
3,3'-Dichlorobenzidine	ug/kg	--	1200 U	800 U	780 U	740 U
3-Nitroaniline	ug/kg	--	3000 U	2000 U	2000 U	1900 U
4,6-Dinitro-2-methylphenol	ug/kg	2500	3000 U	2000 U	2000 U	1900 U
4-Bromophenyl phenyl ether	ug/kg	--	590 U	400 U	380 U	370 U
4-Chloro-3-methylphenol	ug/kg	13200	590 U	400 U	380 U	370 U
4-Chloroaniline	ug/kg	--	590 U	400 U	380 U	370 U
4-Chlorophenyl phenyl ether	ug/kg	--	590 U	400 U	380 U	370 U
4-Methylphenol	ug/kg	3800	590 U	400 U	380 U	370 U
4-Nitroaniline	ug/kg	--	3000 U	2000 U	2000 U	1900 U
4-Nitrophenol	ug/kg	6000	3000 U	2000 U	2000 U	1900 UJ
Acenaphthene	ug/kg	300000	590 U	400 U	380 U	370 U
Acenaphthylene	ug/kg	130000	590 U	400 U	380 U	370 U
Acetophenone	ug/kg	--	590 U	400 U	380 U	370 U
Anthracene	ug/kg	500000	590 U	400 U	380 U	370 U
Atrazine	ug/kg	--	590 U	400 U	380 U	370 U
Benzaldehyde	ug/kg	--	590 U	400 U	380 U	370 U
Benzo(a)anthracene	ug/kg	5000	590 U	400 U	380 U	370 U
Benzo(a)pyrene	ug/kg	1640	590 U	400 U	380 U	370 U
Benzo(b)fluoranthene	ug/kg	5000	590 U	400 U	380 U	370 U
Benzo(g,h,i)perylene	ug/kg	500000	590 U	400 U	380 U	370 U
Benzo(k)fluoranthene	ug/kg	5000	590 U	400 U	380 U	370 U
Biphenyl (1,1-Biphenyl)	ug/kg	--	590 U	400 U	380 U	370 U
bis(2-Chloroethoxy)methane	ug/kg	--	590 U	400 U	380 U	370 U
bis(2-Chloroethyl)ether	ug/kg	--	590 U	400 U	380 U	370 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/kg	50000	590 U	400 U	380 U	370 U
Butyl benzylphthalate (BBP)	ug/kg	50000	590 U	400 U	380 U	370 U
Caprolactam	ug/kg	--	590 U	400 U	380 U	370 U
Carbazole	ug/kg	--	590 U	400 U	380 U	370 U
Chrysene	ug/kg	5000	590 U	400 U	380 U	370 U
Dibenz(a,h)anthracene	ug/kg	5000	590 U	400 U	380 U	370 U
Dibenzofuran	ug/kg	--	590 U	400 U	380 U	370 U
Diethyl phthalate	ug/kg	--	590 U	400 U	380 U	370 U
Dimethyl phthalate	ug/kg	--	590 U	400 U	380 U	370 U
Di-n-butylphthalate (DBP)	ug/kg	--	590 U	400 U	380 U	370 U
Di-n-octyl phthalate (DnOP)	ug/kg	--	590 U	400 U	380 U	370 U
Fluoranthene	ug/kg	500000	590 U	400 U	380 U	370 U
Fluorene	ug/kg	360000	1100	1900	380 U	370 U
Hexachlorobenzene	ug/kg	--	590 U	400 U	380 U	370 U
Hexachlorobutadiene	ug/kg	17500	590 U	400 U	380 U	370 U
Hexachlorocyclopentadiene	ug/kg	--	1200 U	790 U	770 U	730 U
Hexachloroethane	ug/kg	--	590 U	400 U	380 U	370 U
Indeno(1,2,3-cd)pyrene	ug/kg	5000	590 U	400 U	380 U	370 U
Isophorone	ug/kg	--	590 U	400 U	380 U	370 U
Naphthalene	ug/kg	100000	590 U	400 U	380 U	370 U
Nitrobenzene	ug/kg	--	590 U	400 U	380 U	370 U
N-Nitrosodi-n-propylamine	ug/kg	--	590 U	400 U	380 U	370 U
N-Nitrosodiphenylamine	ug/kg	--	590 U	400 U	380 U	370 U
Pentachlorophenol	ug/kg	3300	3000 U	2000 U	2000 U	1900 U
Phenanthrene	ug/kg	110000	3100	400 U	380 U	370 U
Phenol	ug/kg	400000	590 U	400 U	380 U	370 U
Pyrene	ug/kg	500000	590 U	400 U	380 U	370 U

Table 3

Soil Analytical Data (May 2016)
Epic Midstream LLC
Savannah, Georgia
VRP #1440101197

Sample Location:			***SAG-001***	***SAG-002***	***SAG-003***	***SAG-004***
Sample ID:			***089400-050416-SAG-001***	***089400-050416-SAG-002***	***089400-050416-SAG-003***	***089400-050416-SAG-004***
Sample Date:			***5/4/2016***	***5/4/2016***	***5/4/2016***	***5/4/2016***
Sample Depth:			***(2-) ft BGS***	***(2-) ft BGS***	***(2-) ft BGS***	***(2-) ft BGS***
Parameters	***Units***	***Type 3 RRS***				
VOCs						
1,1,1-Trichloroethane	ug/kg	20000	3.5 UJ	3.2 U	3.2 U	3.5 U
1,1,2,2-Tetrachloroethane	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
1,1,2-Trichloroethane	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
1,1-Dichloroethane	ug/kg	400000	3.5 UJ	3.2 U	3.2 U	3.5 U
1,1-Dichloroethene	ug/kg	700	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2,4-Trichlorobenzene	ug/kg	10830	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	20	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2-Dibromoethane (Ethylene dibromide)	ug/kg	10	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2-Dichlorobenzene	ug/kg	60000	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2-Dichloroethane	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
1,2-Dichloropropane	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
1,3-Dichlorobenzene	ug/kg	60000	3.5 UJ	3.2 U	3.2 U	3.5 U
1,4-Dichlorobenzene	ug/kg	7500	3.5 UJ	3.2 U	3.2 U	3.5 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	200000	35 UJ	32 U	32 U	35 U
2-Hexanone	ug/kg	--	7.0 UJ	6.4 U	6.4 U	6.9 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/kg	200000	7.0 UJ	6.4 U	6.4 U	6.9 U
Acetone	ug/kg	400000	170 J	92	64 U	69 U
Benzene	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
Bromodichloromethane	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Bromoform	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Bromomethane (Methyl bromide)	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Carbon disulfide	ug/kg	400000	7.0 UJ	6.4 U	6.4 U	6.9 U
Carbon tetrachloride	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
Chlorobenzene	ug/kg	10000	3.5 UJ	3.2 U	3.2 U	3.5 U
Chloroethane	ug/kg	1000	7.0 UJ	6.4 U	6.4 U	6.9 U
Chloroform (Trichloromethane)	ug/kg	10000	3.5 UJ	3.2 U	3.2 U	3.5 U
Chloromethane (Methyl chloride)	ug/kg	300	7.0 UJ	6.4 U	6.4 U	6.9 U
cis-1,2-Dichloroethene	ug/kg	7000	3.5 UJ	3.2 U	3.2 U	3.5 U
cis-1,3-Dichloropropene	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Cyclohexane	ug/kg	20000	3.5 UJ	3.2 U	3.2 U	3.5 U
Dibromochloromethane	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Dichlorodifluoromethane (CFC-12)	ug/kg	--	7.0 UJ	6.4 U	6.4 U	6.9 U
Ethylbenzene	ug/kg	70000	3.5 UJ	3.2 U	3.2 U	3.5 U
Isopropyl benzene	ug/kg	21880	120 J	15	3.2 U	3.5 U
m&p-Xylenes	ug/kg	--	3.6 J	3.2 U	3.2 U	3.5 U
Methyl acetate	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Methyl cyclohexane	ug/kg	--	520	16	3.2 U	5.1
Methyl tert butyl ether (MTBE)	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Methylene chloride	ug/kg	800	14 UJ	13 U	13 U	14 U
o-Xylene	ug/kg	1000000	16 J	3.2 U	3.2 U	3.5 U
Styrene	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Tetrachloroethene	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
Toluene	ug/kg	100000	3.5 UJ	3.2 U	3.2 U	3.5 U
trans-1,2-Dichloroethene	ug/kg	10000	3.5 UJ	3.2 U	3.2 U	3.5 U
trans-1,3-Dichloropropene	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Trichloroethene	ug/kg	500	3.5 UJ	3.2 U	3.2 U	3.5 U
Trichlorofluoromethane (CFC-11)	ug/kg	--	3.5 UJ	3.2 U	3.2 U	3.5 U
Trifluorotrichloroethane (CFC-113)	ug/kg	100000000	7.0 UJ	6.4 U	6.4 U	6.9 U
Vinyl chloride	ug/kg	200	7.0 UJ	6.4 U	6.4 U	6.9 U
Wet						
Moisture content (dry weight)	%		15.4	16.7	13.9	9.61

Footnotes:
U - Not detected at the associated value
J - estimated concentration

Table 4

Milestone Schedule
June 1, 2016 to December 1, 2016
Epic Midstream LLC
Savannah, Georgia
VRP #1440101197

Milestone	***Timeline***
Submittal of Semi-Annual Progress Report	June 1, 2016
Interim LNAPL Skimming Program	May 17, 2016 - September 30, 2016
Complete LNAPL Transmissivity Evaluation	October 31, 2016
Complete On-Site Horizontal/Vertical Delineation	September 1, 2016
Complete Vapor Intrusion Pathway Evaluation	September 1, 2016
Submittal of Semi-Annual Progress Report	December 1, 2016

Appendices

Appendix A

Site Investigation Summary Report No. 2, Terracon
December 15, 2015

SITE INVESTIGATION SUMMARY REPORT NO. 2

Axeon Savannah Terminal
7 Foundation Drive
Savannah, Chatham County, Georgia

December 15, 2015
Terracon Project No. ES157077

Prepared for:

Axeon Specialty Products
Savannah, Georgia

Prepared by:

Terracon Consultants, Inc.
Savannah, Georgia

Terracon

December 15, 2015

Georgia Environmental Protection Division
Response and Remediation Program
Land Protection Branch
2 Martin Luther King, Jr. Drive SE
Suite 1054 East
Atlanta, Georgia 30334

Attn: Mr. Peter Johnson, P.G.
P: (404) 657 0490
E: peter.johnson@dnr.ga.gov

Re: Site Investigation Summary Report No. 2
Axeon Savannah Terminal
7 Foundation Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES157077

Dear Mr. Johnson:

Terracon Consultants, Inc. (Terracon) is submitting a Site Investigation Summary Report No. 2 ($SISR_2$) for the above-referenced facility on behalf of Axeon Specialty Products. The purpose of this report is to document the results of the activities recommended in the $SISR_1$ (dated September 15, 2015). Additional work was also conducted to satisfy the milestones outlined in the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100) application dated August 8, 2015.

If you have any questions concerning this report, please contact us at (912) 629 4000.

Sincerely,
Terracon Consultants, Inc.

R. Luke Bragg, P.E.
Project Manager I

GEORGIA REGISTERED No. PE040539 PROFESSIONAL ENGINEER ROBERT LUKE BRAGG

William S. Anderson, III, P.E.
Senior Principal

GEORGIA REGISTERED No. 20997 PROFESSIONAL ENGINEER WILLIAM S. ANDERSON III

Enclosures
cc: 1 – Georgia EPD (1 hard copy; 2 electronic copies)
1 – Client (1 hard copy; 1 electronic copy)
1 – File (1 electronic copy)

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SITE INVESTIGATION SUMMARY REPORT NO. 2

AXEON SAVANNAH TERMINAL
7 Foundation Drive
Savannah, Chatham County, Georgia

Terracon Project No. ES157077
December 15, 2015

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has completed this Site Investigation Summary Report No. 2 ($SISR_2$) on behalf of Axeon Specialty Products for the Axeon Savannah Terminal facility located at 7 Foundation Drive in Savannah, Chatham County, Georgia (Property). A Site Vicinity Map has been prepared as Figure 1 in Appendix A. A Site Plan detailing monitoring well locations and pertinent site features has been prepared as Figure 2 in Appendix A.

1.1 Background

A Voluntary Remediation Program (VRP) Application was submitted to the Georgia Environmental Protection Division (Georgia EPD) on August 8, 2015. This VRP Application was completed in general accordance with the Georgia Voluntary Remediation Program Act (O.C.G.A. § 12-8-100) and the directions received during the meeting between Terracon and the Georgia EPD on July 22, 2015. The purpose of this document was to provide justification for enrollment of the property into the VRP by presenting a current understanding of site conditions based on existing data and a preliminary conceptual site model (CSM), a plan for additional voluntary investigation to fill data gaps, and a plan for the development of a remedial design.

The preliminary CSM detailed in the August 2015 VRP Application was developed, in part, utilizing information from numerous environmental reports dating back to 1989. As indicated in the VRP Application, several data gaps were identified. Specifically, Terracon noted a lack of detailed site wide lithological information and laboratory analytical data to identify regulated chemicals of potential concern (COPCs). In order to further develop the CSM, Terracon collected groundwater samples for laboratory analysis from ten (10) existing monitoring wells and conducted a site wide direct push sampling event. A total of thirteen (13) borings were advanced across the site via direct push methods. Ten (10) soil samples and six (6) groundwater samples were collected from the temporary borings and submitted for laboratory analysis. During the direct push sampling event, Terracon continuously logged soils to the surficial aquifer confining layer pursuant to the development of stratigraphic cross-sections.

The laboratory analytical data presented in the $SISR_1$ (dated September 15, 2015) suggested minimal volatile organic compound (VOC), semi-volatile organic compound (SVOC), and Resource Conservation and Recovery Act (RCRA) metal impacts to on-site soils and groundwater. The following regulated COPCs at concentrations in excess of the applicable limits were identified as follows: MEK (soil), benzene (groundwater), naphthalene (groundwater), arsenic (groundwater), and lead (groundwater). Based on a review of the laboratory chromatograms and discussions with laboratory analysts, soil and groundwater organic contamination at the site (aside from the documented LNAPL) primarily consisted of long chain hydrocarbons not detectable by EPA Method 8260 or 8270. This contamination was deemed to be the result of the heavy weathering of petroleum-related products. Figures 3A, 3B, 4A, and 4B (Appendix A) detail analytical data presented in the $SISR_1$.

Arsenic and lead were detected at concentrations above the Georgia EPD Appendix III Notification Concentrations in the groundwater samples collected from monitoring wells AW-37, AW-44, and AW-67. As such, Terracon recommended that monitoring wells AW-37, AW-44, and AW-67 be rehabilitated (via redevelopment, surge block, etc.) prior to the next sampling event to confirm arsenic and lead as COPCs in groundwater.

In a letter dated November 24, 2015, the Georgia EPD stated that Axeon Specialty Products had been accepted as a participant as defined in the VRP. Parcel ID Numbers 1-065-01-001 and 1-065-01-001L located at 7 Foundation Drive in Savannah, Chatham County, Georgia were accepted as qualifying properties.

1.2 Purpose and Scope of Work

The purpose of this report is to document the rehabilitation and resampling of monitoring wells AW-37, AW-44, and AW-67. This report also details the conversion of AW-62 to a 4-inch diameter well, the installation of a point of demonstration (POD) well, and the results of slug testing. In addition, Type 3 risk reduction standards (RRS) are presented for the site COPCs.

2.0 FIELD ACTIVITIES

2.1 Groundwater Monitoring Well Redevelopment

Monitoring wells AW-37, AW-44, and AW-67 were redeveloped on October 21, 2015 through October 23, 2015. The wells were redeveloped utilizing a surge block and a downhole submersible pump in general accordance with the procedures described in the U.S. EPA Region 4, Science and Ecosystem Support Division guidance document titled *Design and Installation of Monitoring Wells (SESDGUID-101-R1, dated January 29, 2013).* The surge block was placed within the screened portion of each well and moved up and down so as to draw fine grained

media into the well from the filter pack. After surging, each well was over-pumped utilizing a downhole submersible pump to remove sediment and turbid groundwater. Surging/over-pumping was repeated until the turbidity in each well was reduced below 10 NTUs.

2.2 Groundwater Monitoring Well Sampling

Groundwater samples were collected from AW-37, AW-44, and AW-67 on October 30, 2015 The monitoring wells were developed, purged, and sampled in general accordance with the procedures outlined in the U.S. Environmental Protection Agency (EPA) Science and Ecosystem Support Division (SESD) *Field Branches Quality System and Technical Procedures* (SESDPROC-301-R3, March 6, 2013). A brief overview of these procedures is below.

The monitoring wells were purged utilizing the "Tubing-in-Screened-Interval" method (low flow method). Prior to purging, new Teflon lined tubing was placed within the approximate mid-portion of the screened interval of the well. This tubing was attached to GeoTech® peristaltic pump and then connected to a flow cell equipped YSI 556 Multiparameter Water Quality Meter. A Hach 2100Q Portable Turbidimeter was used to monitor the groundwater turbidity. During purging, the flow rate was adjusted so as to minimize head loss within the monitoring well. In order to ensure the monitoring well was adequately purged, the following parameters were monitored for stabilization: pH, temperature, dissolved oxygen (DO), specific conductance, oxidation reduction potential (ORP), and turbidity.

Stabilization was deemed to occur when, for at least three consecutive measurements, the pH remained constant within 0.1 standard unit, the DO varied no more than 0.2 mg/L, and the turbidity was less than 10 NTU. In the event the turbidity could not be reduced below 10 NTU in a reasonable time period, a filter sample was collected.

All sampling utensils were decontaminated in general accordance with ASTM D5088 – 15 "Decontamination of Field Equipment Used at Waste Sites." The downhole sampling equipment was cleaned using Alconox soap and water before arrival at the site, before introduction into the subsurface, between each sampling, between each borehole location, and before leaving the site. New disposable gloves were also utilized between each boring to minimize the possibility of cross contamination.

2.3 Soil Sampling

On November 6, 2015, Terracon personnel mobilized to the site to collected Synthetic Precipitation Leaching Procedure (SPLP) samples pursuant to the evaluation of RRS. Soil samples were collected within the interior of the site (TW-5) and adjacent to the poly wall barrier (TW-11) as shown on Figure 2 in Appendix A. Soil sampling was conducted utilizing a stainless steel hand auger to retrieve a soil sample from just above the saturated zone at each location.

Soil samples were placed in a sealed container upon removal from the boring. The soil samples were logged on the chain of custody and placed on ice in an insulated cooler. The cooler was sealed and hand delivered to Pace Analytical Services, Inc. (NELAP No. E87648) in Huntersville, North Carolina to be analyzed for the soil COPC MEK utilizing the SPLP procedure (SW-846 Method 1312).

2.4 Monitoring Well Installation

2.4.1 AW-62

In order to facilitate Axeon's corrective action objectives, AW-62 was over-drilled and converted from a 2-inch diameter monitoring well to a 4-inch diameter monitoring well on November 3, 2015. Monitoring well AW-62 was over-drilled and installed in accordance with the procedures described in the US EPA Region 4, Science and Ecosystem Support Division guidance document titled *Design and Installation of Monitoring Wells (SESDGUID-101-R1, dated January 29, 2013).* Borehole advancement was completed using a truck-mounted CME 55 drill rig under the supervision of Terracon.

Prior to the initiation of drilling activities, the concrete pad and flush-mount well cover were removed. The previous 2-inch diameter monitoring well casing and screen were removed, (along with the existing filter pack sand, bentonite seal, and grout) by advancing 6.25-inch outside diameter hollow-stem augers to an approximate depth of 20.5 feet below grade.

The well was over-drilled by advancing 8.25-inch outside diameter hollow-stem augers equipped with a bottom plug to an approximate depth of 20.5 feet below grade. A well-sorted filter 20/30 filter pack sand was poured into the hollow-stem auger to begin filter pack placement. Once approximately 6-inches of sand had been placed into the annulus, the monitoring well was constructed utilizing a 4-inch diameter, 15-foot long, Schedule 40 PVC screen and endpoint, and a 4-inch diameter, Schedule 40 PVC riser. The well assembly was lowered into the hollow-stem auger and the bottom plug was released. The sand filter pack was then continued vertically and the hollow-stem auger was gradually removed in order to prevent the annulus from collapsing. Filter pack placement ceased approximately 2 feet above the top of the screened interval. A hydrated bentonite seal was placed approximately 2 foot above the filter pack. Portland Type I/II cement grout was installed using a tremie pipe above the bentonite seal to near grade.

2.4.2 Point of Demonstration Well

A POD well (designated POD-1) was installed between AW-62 and the Savannah River on November 3, 2015. Given site logistical restrictions, POD-1 was installed approximately 10 feet downgradient of AW-62. Well POD-1 was installed in general accordance with the procedures described above. The well was installed to a total depth of 20.5 feet below grade and was constructed utilizing a 2-inch diameter, 15-foot long, Schedule 40 PVC screen and endpoint, and a 2-inch diameter, Schedule 40 riser.

The newly installed monitoring wells were developed after installation in order to restore the natural hydraulic conductivity of the surficial aquifer. The development water was containerized on-site in 55-gallon steel drums. Soil boring logs and well construction details are included in Appendix D.

2.5 Slug Testing

Field slug test activities occurred on November 3, 2015 and were conducted on monitoring wells AW-25 and AW-71 in order to determine the hydraulic conductivity (K) of the surficial formation. As shown on Figure 2 (Appendix A), AW-25 is located within the interior of the site and AW-71 is located immediately upgradient to the poly wall barrier. Prior to the measurement of static groundwater levels, the monitoring well caps were removed for approximately 30 minutes to allow for adequate pressure equalization. Following the measurement of static groundwater levels, a Level TROLL 700 transducer with on-board data logger was placed approximately 5 feet below the static groundwater level, a disposable bailer was submerged just below the static water level, and the groundwater level was allowed to return to static conditions after the introduction of the equipment. The data logger was affixed to a Compaq Pocket PC (with Win-Situ 2000 software) and programmed to reflect site conditions.

Immediately prior to the initiation of data collection, the disposable bailer was rapidly withdrawn, removing a 'slug' of groundwater. Using the data logger, depth to water and pressure data was collected every 0.25 seconds until the groundwater level within the monitoring well returned to static conditions.

3.0 DATA ANALYSIS

3.1 LNAPL Gauging Results

Over-drilled well AW-62 was gauged utilizing a Solinst® Oil/Water Interface Probe on November 12, 2015, November 18, 2015, November 23, 2015, and December 4, 2015. No measureable LNAPL was detected during the gauging events. Point of demonstration well POD-1 was gauged on December 4, 2015 and no measureable LNAPL was detected.

3.2 Soil Analytical Results

The SPLP analytical data indicated that the soil COPC MEK was not detected at a concentration above the laboratory method reporting limit (5.0 µg/L) in the soil samples submitted for laboratory analysis. Complete chain of custody and laboratory data sheets have been included in Appendix C.

3.3 Groundwater Analytical Results

The RCRA metal groundwater laboratory analytical results were compared to the Georgia EPD Appendix III Notification Concentrations. Arsenic was detected at concentrations in excess of the Georgia EPD Appendix III Notification Concentration of 0.010 mg/L in the groundwater samples collected from AW-37 (0.0196 mg/L) and AW-67 (0.0121 mg/L). Analysis of the groundwater samples collected from AW-37 and AW-67 following filtration with a 0.45 µm filter did not exhibit arsenic concentrations in excess of the laboratory reporting limit (0.010 mg/L).

Although turbidity levels were low during this resampling, it is evident that particulates were still present in the total samples as compared to the laboratory filtered samples. Therefore, the presence of micro-particulates influence the arsenic concentrations and do not necessarily reflect actual dissolved in-situ arsenic concentrations.

Lead was not detected at concentrations in excess of the laboratory reporting limit (0.0050 mg/L) in the samples submitted for analysis. Given that lead was not detected following redevelopment, it appears that the previous detection of lead at a concentration in excess of the Georgia EPD Appendix III Notification Concentration was a false-positive due to turbidity. As such, lead is not a COPC at the site.

Barium was detected in each of the groundwater samples at concentrations well below the Georgia EPD Appendix III Notification Concentration of 2 mg/L.

Groundwater RCRA metal analytical data is presented on Figure 4A in Appendix A.The groundwater analytical results for RCRA metals have been tabulated on Table 2A in Appendix

B. Data from the August 2015 sampling event has been included for comparison. Complete chain of custody and laboratory data sheets have been included in Appendix C.

4.0 SLUG TEST ANALYTICAL TECHNIQUE AND RESULTS

Time and depth to water data from the slug tests was imported into the AQTESOLV™ aquifer software for analysis. Additional information input to the software included the monitoring well diameter, the borehole diameter, the total depth of the monitoring well, the static water column height, the initial displacement, and an assumed gravel pack porosity. Based on site conditions, the aquifer was assumed to be unconfined in the model. Based on the slug test methodology and resulting data, the Bouwer and Rice method was utilized to determine the hydraulic conductivity (K) of the surrounding formation. The governing Bouwer and Rice (1976) equation is presented below:

$$K = \frac{r_c^2 \ln(\frac{R_e}{R})}{2L_e} \frac{1}{t} \ln(\frac{H_0}{H_t})$$

Where

- K is hydraulic conductivity (cm/s)
- r_c is the radius of the well casing (cm)
- R is the radius of the gravel envelope (cm)
- R_e is the effective radial distance over which head is dissipated (cm)
- L_e is the length of the screen or open section of the well through which water can enter (cm)
- H_0 is the drawdown at time t = 0 (cm)
- H_t is the drawdown at time t = t (cm)
- t is the time since H = H_0 (sec)

When the Bouwer and Rice method is used for slug test analysis, a single straight line is expected from the data. However, when the well used for the test is screened across the water table, the response data may give the appearance of two straight lines on a plot of log normalized head vs. time. As is the case with the slug tests conducted for this site, the initial, steeper straight line segment represents the drainage of water into the filter pack. The second, less steep straight line segment develops after the initial filter pack drainage and represents the response of the aquifer.

The casing radius was corrected for the effective porosity of the filter pack using the following equation from Bouwer (1989):

$$r_c^* = [(1-n)r_c^2 + nr_w^2]^{\frac{1}{2}}$$

Where

- r_c^* is the corrected casing radius (cm)
- n is is the effective porosity (specific yield) of the filter pack (dimensionless)
- r_c is the nominal casing radius (cm)
- r_w is the well radius (cm)

The resulting hydraulic conductivity (K) values for each slug test are presented below. Values are presented in cm/sec.

Monitoring Well	Test 1	Test 2	Test 3	Average
AW-25	1.669×10^{-4}	1.039×10^{-4}	---	1.354×10^{-4}
AW-71	6.098×10^{-5}	7.952×10^{-5}	1.48×10^{-4}	9.617×10^{-5}

Based on the results of the slug tests, the average hydraulic conductivity of the shallow portion of the surficial aquifer is 1.158×10^{-4} cm/sec. As shown in the table above, the hydraulic conductivity immediately upgradient of the poly wall barrier (AW-71) is slightly less than the hydraulic conductivity within the interior of the site (AW-25). Input and output from the AQTESOLV™ aquifer software, including graphs of Normalized Head vs. Time has been included in Appendix E.

5.0 RISK REDUCTION STANDARDS

Type 3 Risk Reduction Standards (RRS) were calculated in accordance with Rules of the Georgia EPD Chapter 391-3-.07(8) for detected COPCs. Type 3 RRS provide for regulated substance concentrations that pose no significant risk on the basis of standardized exposure assumptions and defined risk levels for the non-residential use scenario. Type 3 RRS were calculated for COPCs in soil and groundwater based on the following:

A. Criteria for groundwater. The groundwater criteria for Type 3 are the same as for Type 1: At any point within groundwater that has been affected by a release, concentrations of regulated substances in groundwater samples shall not exceed concentrations given in Table 1 of Appendix III or, for those substances not listed, the background or detection limit concentration. If two or more regulated organic compounds are present in groundwater, their sum in a single sample shall not exceed 10 mg/L if the Table 1 value for each compound is less than 5 mg/L, or, where at least one compound has a Table 1 value greater than or equal to 5 mg/L, the sum of the concentrations shall not exceed the maximum Table 1 value for a detected compound plus 10 mg/L.

B. Criteria for soil.

1. Concentrations at any point above the uppermost groundwater zone in soil that has been affected by a release shall not exceed the higher of:
    i. Concentrations described in Item 1 of Rule 391-3-19-.07(6)(c).
    ii. Concentrations listed in Table 2 of Appendix III.
    iii. For lead, 400 mg/kg
2. Concentrations in surface soil (soil within 2 feet of land surface) shall meet the criteria of Item 1 above and, in addition, shall not exceed the lower of the concentrations defined in Items (i) through (iii) below. If none of the calculations implied below can be made, the surface soil criterion shall be equal to the criterion of Item 1 above.
    i. Concentrations which are unlikely to result in any noncancer toxic effects on human health due to ingestion of soil and inhalation of particulates and volatiles, determined using Equation 7 of RAGS, Part B, and standard nonresidential exposure assumptions in Table 3 of Appendix III.
    ii. Concentrations for which the upper bound on the estimated excess cancer risk is less than or equal to 10^{-5} (10^{-4} for Class C carcinogens) for human ingestion of soil and inhalation of particulates and volatiles, determined using Equation 6, RAGS, Part B, and standard nonresidential exposure assumptions in Table 3 of Appendix III.
    iii. For lead, 400 mg/kg.

The tables in Appendix F detail the parameters utilized for the determination of Type 3 RRS. At the time of Type 3 RRS calculation, the June 2015 revision of the US EPA Region 9 Regional Screening Level tables was the most current. The calculated Type 3 RRS for COPCs detected on-site are presented below:

Analyte	CAS No.	Media	Type 3 RRS
Methyl Ethyl Ketone (MEK)	78-93-3	Soil	200 mg/kg
Arsenic	7440-38-2	Groundwater	0.010 mg/L
Benzene	71-43-2	Groundwater	0.005 mg/L
Naphthalene	91-20-3	Groundwater	0.02 mg/L

6.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Terracon mobilized to the site to redevelop monitoring wells AW-37, AW-44, and AW-67 on October 21, 2015 through October 23, 2015. Groundwater samples were collected from AW-37, AW-44, and AW-67 on October 30, 2015 and submitted to an independent laboratory to be analyzed for RCRA metals. On November 6, 2015, Terracon collected SPLP samples within the interior of the site and adjacent to the poly wall barrier.

In order to facilitate Axeon's corrective action objectives, AW-62 was over-drilled and converted from a 2-inch diameter monitoring well to a 4-inch diameter monitoring well on November 3, 2015. A POD well (designated POD-1) was installed between AW-62 and the Savannah River on November 3, 2015. Given site logistical restrictions, POD-1 was installed approximately 10 feet downgradient of AW-62. Field slug test activities also occurred on November 3, 2015 and were conducted on monitoring wells AW-25 and AW-71 in order to determine the hydraulic conductivity (K) of the surficial formation.

6.1 Findings

Findings from Terracon's recent site activities are presented below:

- LNAPL has not been detected in AW-62 since being over-drilled and developed on November 3, 2015. LNAPL was not detected in POD-1 during the gauging event on December 4, 2015.
- The SPLP analytical data indicated that the soil COPC MEK was not detected at a concentration above the laboratory method reporting limit (5.0 µg/L) in the soil samples submitted for laboratory analysis.
- The RCRA metal groundwater laboratory analytical results were compared to the Georgia EPD Appendix III Notification Concentrations. Arsenic was detected at concentrations in excess of the Georgia EPD Appendix III Notification Concentration of 0.010 mg/L in the groundwater samples collected from AW-37 (0.0196 mg/L) and AW-67 (0.0121 mg/L). Analysis of the groundwater samples collected from AW-37 and AW-67 following filtration with a 0.45 µm filter did not exhibit arsenic concentrations in excess of the laboratory reporting limit (0.010 mg/L).
- Although turbidity levels were low during resampling, it is evident that particulates were still present in the total samples as compared to the laboratory filtered samples. Therefore, the presence of micro-particulates influence the arsenic concentrations and do not necessarily reflect actual dissolved in-situ arsenic concentrations.
- Lead was not detected at concentrations in excess of the laboratory reporting limit (0.0050 mg/L) in the samples submitted for analysis. Barium was detected in each of

the groundwater samples at concentrations well below the Georgia EPD Appendix III Notification Concentration of 2 mg/L.

- Based on the results of the slug tests, the average hydraulic conductivity of the shallow portion of the surficial aquifer is 1.158 x 10^{-4} cm/sec. The hydraulic conductivity immediately upgradient of the poly wall barrier is slightly less than the hydraulic conductivity within the interior of the site.

6.2 Conclusions

Based on the above findings, Terracon has concluded the following:

- Based on previous laboratory analytical data, MEK was identified as a COPC in soil at the site. The detected concentration of MEK was found to be in compliance with the Type 3 RRS. As such, this constituent is not a chemical of concern (COC) for the site. No other VOC, SVOC, or RCRA metal constituents have been detected at concentrations above the Georgia EPD Appendix I Notification Concentrations.
- Given that lead was not detected following well redevelopment, it appears that the previous detection of lead at a concentration in excess of the Georgia EPD Appendix III Notification Concentration was a false-positive due to turbidity. As such, lead is not a COPC at the site.
- Groundwater laboratory analytical data indicates arsenic, benzene, and naphthalene are not in compliance with the Type 3 RRS. As such, these constituents are COCs for the site.

6.3 Recommendations

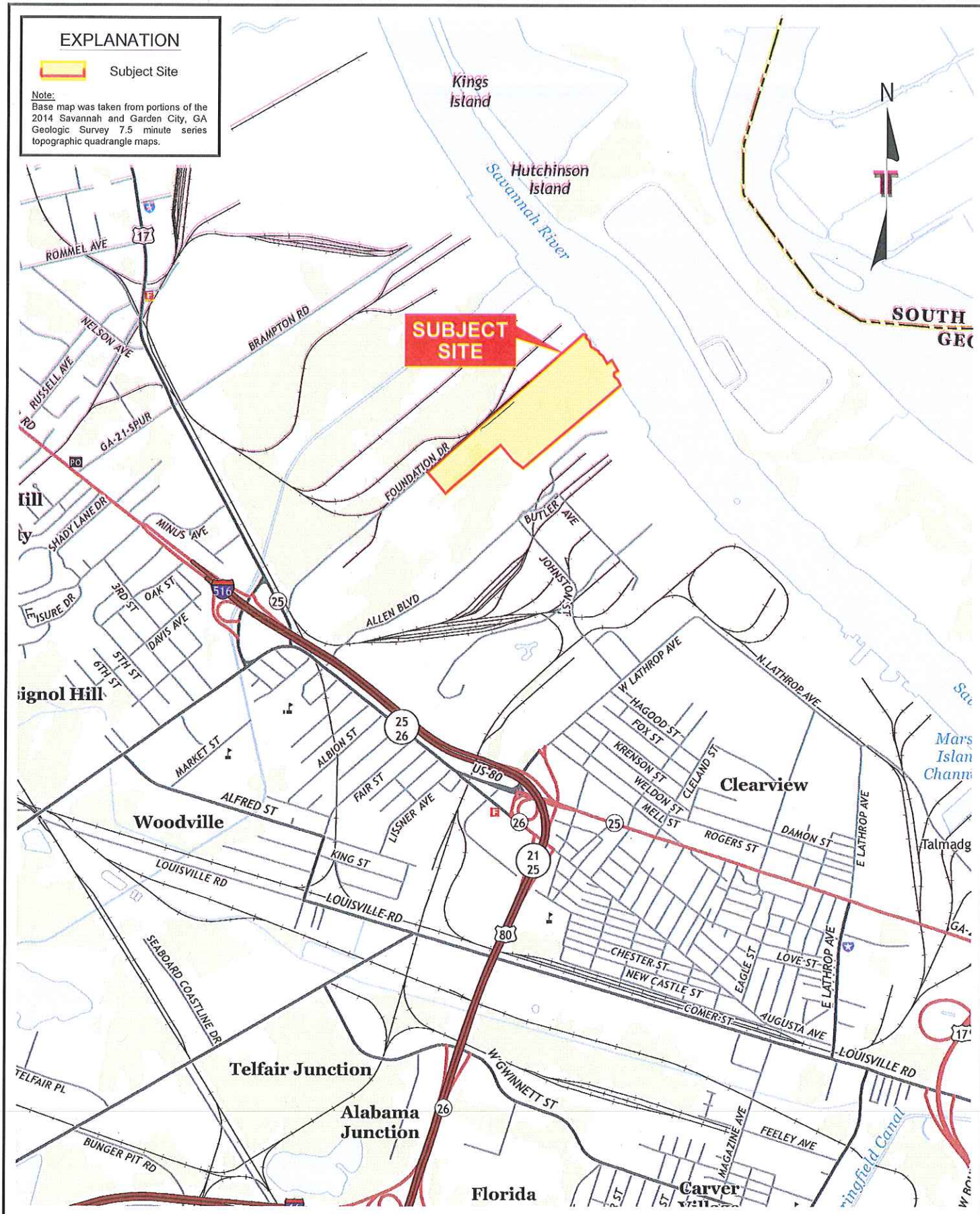
In accordance with the VRP Application (dated on August 8, 2015), the Georgia EPD letter dated November 24, 2015, and the findings presented in this report, Terracon recommends the following:

- Over-drilled well AW-62 and point of demonstration well POD-1 will be completed with a concrete pad and flush-mount, bolt down cover. These wells will also be gauged and sampled. Groundwater samples will be submitted to an independent laboratory to be analyzed for VOCs (EPA Method 8260), SVOCs (EPA Method 8270), and RCRA metals (EPA Method 6010).
- Additional soil characterization will be conducted within the interior of the site to ensure there is no ongoing source of LNAPL contamination. Groundwater samples will be collected as appropriate.
- The vapor intrusion exposure pathway will be evaluated through the use of modeling techniques and/or the collection and analysis of soil gas/indoor air samples.

Results of the recommended activities will be presented in semi-annual progress reports submitted to the Georgia EPD in 2016. The first semi-annual progress report is due to the Georgia EPD on June 1, 2016.

APPENDIX A

FIGURES



0 1,000' 2,000'
1" = 2,000'

Project Mngr:	RLB
Drawn By:	JCM
Checked By:	RLB
Approved By:	WSA

Project No.	ES157077
Scale:	1" = 2,000'
File Name:	ES157077.dwg
Date:	December 1, 2015

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

SITE VICINITY MAP

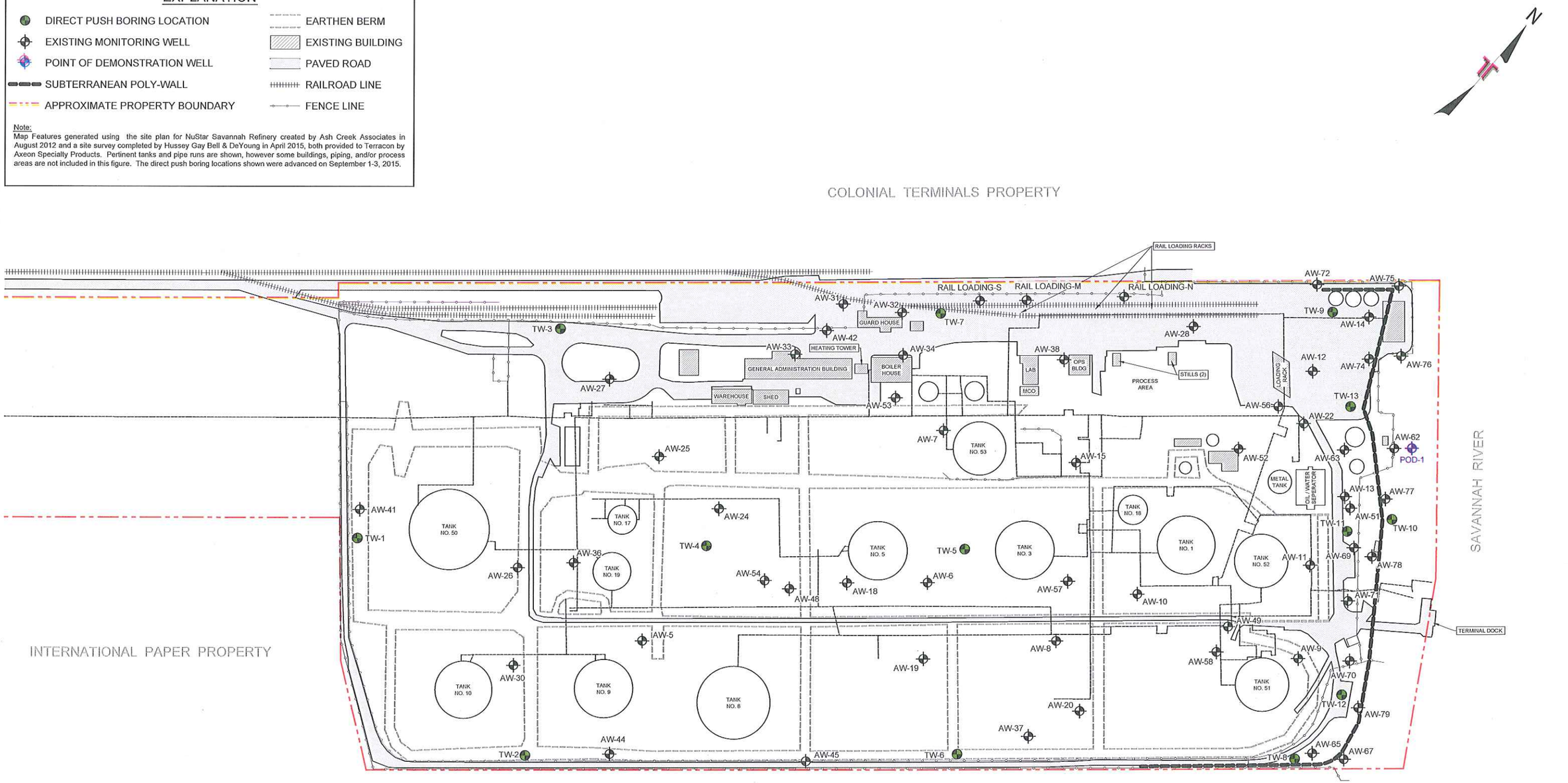
Axeon Specialty Products
Savannah Plant
7 Foundation Drive
Savannah, Chatham County, Georgia

Figure 1

EXPLANATION

- DIRECT PUSH BORING LOCATION
- EXISTING MONITORING WELL
- POINT OF DEMONSTRATION WELL
- SUBTERRANEAN POLY-WALL
- APPROXIMATE PROPERTY BOUNDARY
- EARTHEN BERM
- EXISTING BUILDING
- PAVED ROAD
- RAILROAD LINE
- FENCE LINE

Note:
Map Features generated using the site plan for NuStar Savannah Refinery created by Ash Creek Associates in August 2012 and a site survey completed by Hussey Gay Bell & DeYoung in April 2015, both provided to Terracon by Axeon Specialty Products. Pertinent tanks and pipe runs are shown, however some buildings, piping, and/or process areas are not included in this figure. The direct push boring locations shown were advanced on September 1-3, 2015.



0 100' 200'
1" = 200'
APPROXIMATE SCALE IN FEET

Project Mngr:	RLB
Drawn By:	JCM
Checked By:	RLB
Approved By:	WSA

Project No.	ES157077
Scale:	1" = 200'
File Name:	ES157077.dwg
Date:	December 1, 2015

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

SITE PLAN

Axeon Specialty Products
Savannah Plant
7 Foundation Drive
Savannah, Chatham County, Georgia

Figure
2

EXPLANATION

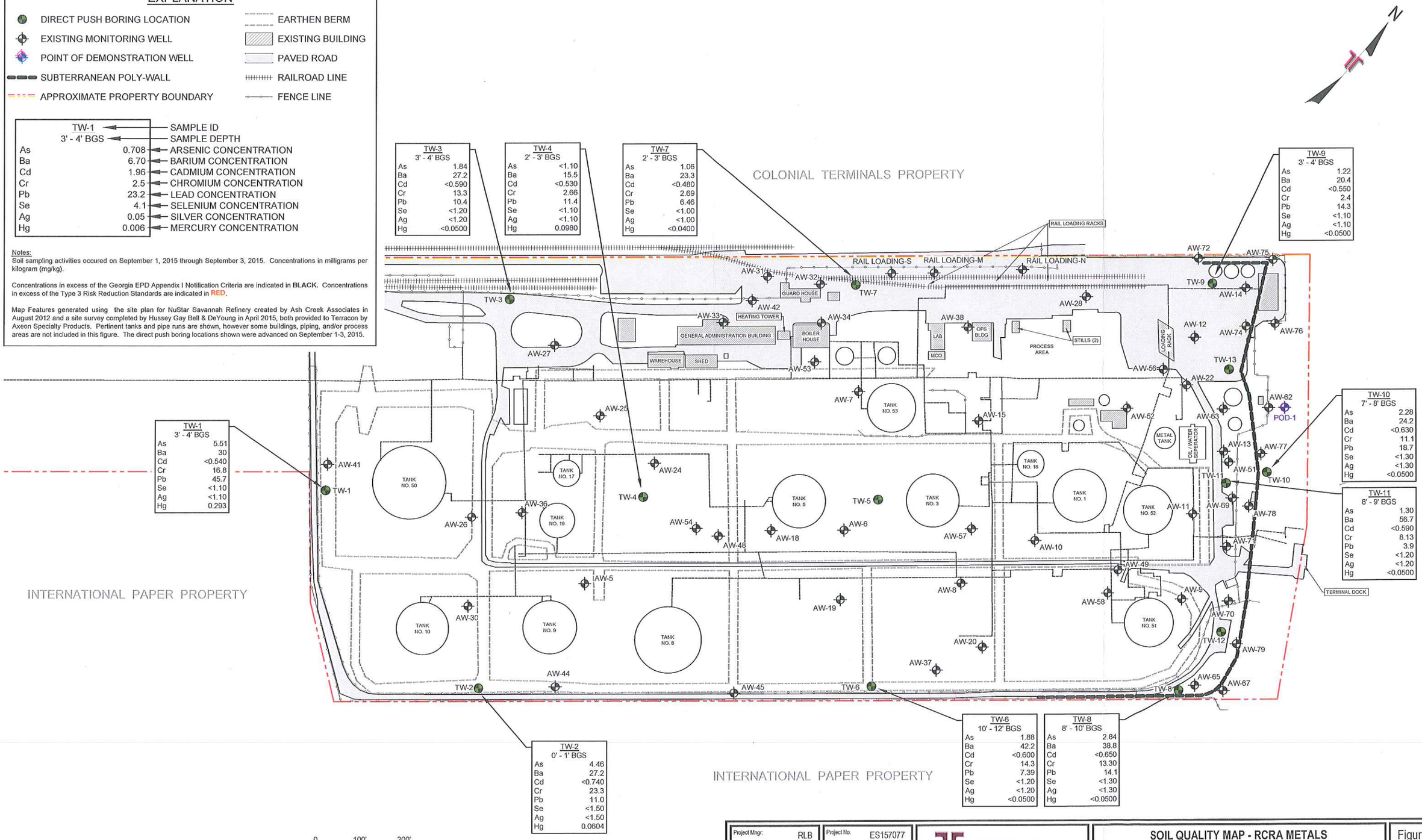
- DIRECT PUSH BORING LOCATION
- EXISTING MONITORING WELL
- POINT OF DEMONSTRATION WELL
- SUBTERRANEAN POLY-WALL
- APPROXIMATE PROPERTY BOUNDARY
- EARTHEN BERM
- EXISTING BUILDING
- PAVED ROAD
- RAILROAD LINE
- FENCE LINE

TW-1	SAMPLE ID
3' - 4' BGS	SAMPLE DEPTH
As 0.708	ARSENIC CONCENTRATION
Ba 6.70	BARIUM CONCENTRATION
Cd 1.96	CADMIUM CONCENTRATION
Cr 2.5	CHROMIUM CONCENTRATION
Pb 23.2	LEAD CONCENTRATION
Se 4.1	SELENIUM CONCENTRATION
Ag 0.05	SILVER CONCENTRATION
Hg 0.006	MERCURY CONCENTRATION

Notes:
Soil sampling activities occured on September 1, 2015 through September 3, 2015. Concentrations in milligrams per kilogram (mg/kg).

Concentrations in excess of the Georgia EPD Appendix I Notification Criteria are indicated in **BLACK**. Concentrations in excess of the Type 3 Risk Reduction Standards are indicated in **RED**.

Map Features generated using the site plan for NuStar Savannah Refinery created by Ash Creek Associates in August 2012 and a site survey completed by Hussey Gay Bell & DeYoung in April 2015, both provided to Terracon by Axeon Specialty Products. Pertinent tanks and pipe runs are shown, however some buildings, piping, and/or process areas are not included in this figure. The direct push boring locations shown were advanced on September 1-3, 2015.



Project Mngr: RLB	Project No. ES157077	Terracon Consulting Engineers & Scientists	SOIL QUALITY MAP - RCRA METALS
Drawn By: JCM	Scale: 1" = 200'	2201 Rowland Avenue Savannah, Georgia 31404	Axeon Specialty Products
Checked By: RLB	File Name: ES157077.dwg	Phone (912) 629 4000 Fax. (912) 629 4001	Savannah Plant
Approved By: WSA	Date: December 1, 2015		7 Foundation Drive
			Savannah, Chatham County, Georgia

Figure 3A

EXPLANATION

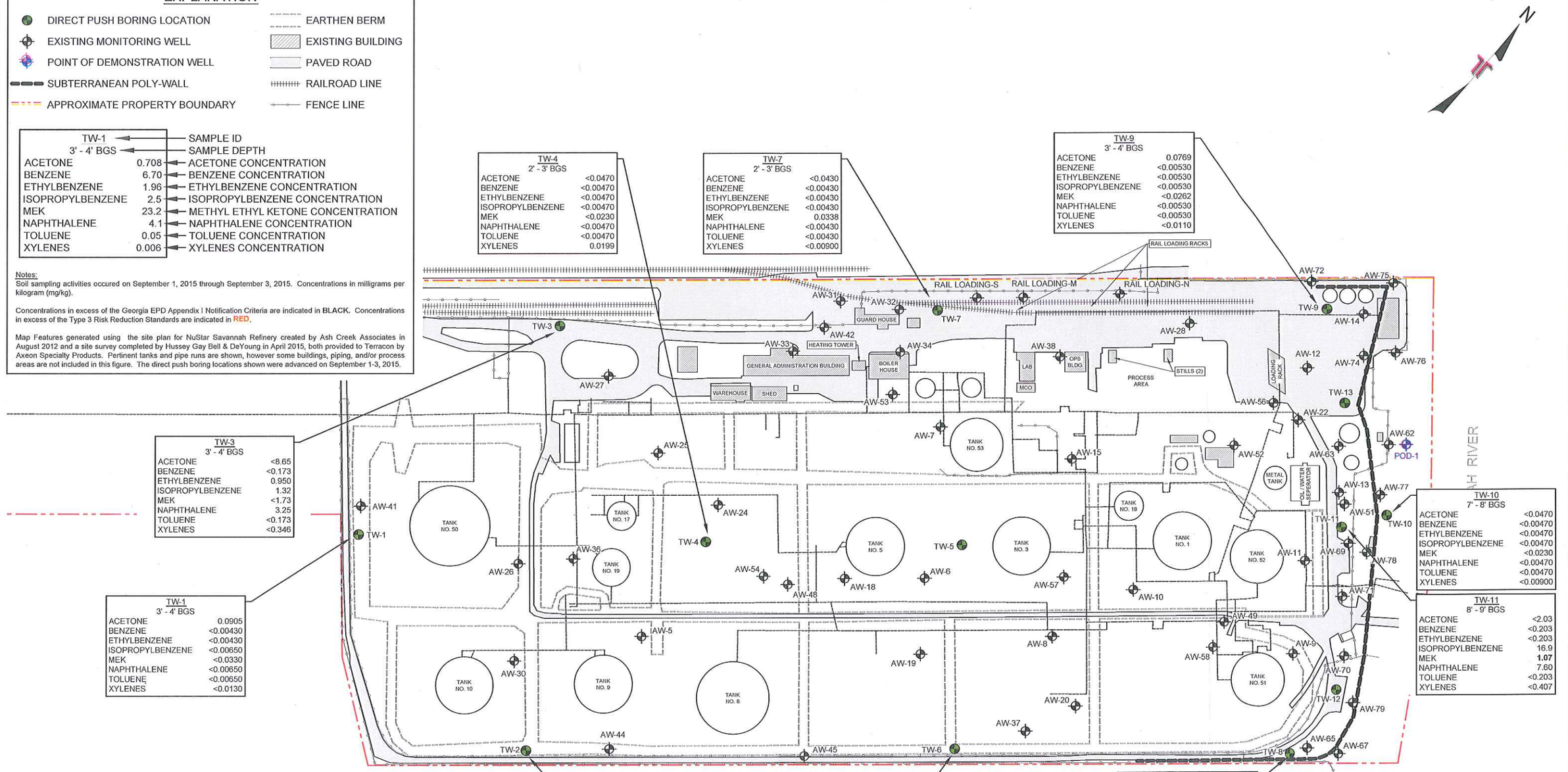
- DIRECT PUSH BORING LOCATION
- EXISTING MONITORING WELL
- POINT OF DEMONSTRATION WELL
- SUBTERRANEAN POLY-WALL
- APPROXIMATE PROPERTY BOUNDARY
- EARTHEN BERM
- EXISTING BUILDING
- PAVED ROAD
- RAILROAD LINE
- FENCE LINE

TW-1	← SAMPLE ID
3' - 4' BGS	← SAMPLE DEPTH
ACETONE 0.708	← ACETONE CONCENTRATION
BENZENE 6.70	← BENZENE CONCENTRATION
ETHYLBENZENE 1.96	← ETHYLBENZENE CONCENTRATION
ISOPROPYLBENZENE 2.5	← ISOPROPYLBENZENE CONCENTRATION
MEK 23.2	← METHYL ETHYL KETONE CONCENTRATION
NAPHTHALENE 4.1	← NAPHTHALENE CONCENTRATION
TOLUENE 0.05	← TOLUENE CONCENTRATION
XYLENES 0.006	← XYLENES CONCENTRATION

Notes:
Soil sampling activities occured on September 1, 2015 through September 3, 2015. Concentrations in milligrams per kilogram (mg/kg).

Concentrations in excess of the Georgia EPD Appendix I Notification Criteria are indicated in **BLACK**. Concentrations in excess of the Type 3 Risk Reduction Standards are indicated in **RED**.

Map Features generated using the site plan for NuStar Savannah Refinery created by Ash Creek Associates in August 2012 and a site survey completed by Hussey Gay Bell & DeYoung in April 2015, both provided to Terracon by Axeon Specialty Products. Pertinent tanks and pipe runs are shown, however some buildings, piping, and/or process areas are not included in this figure. The direct push boring locations shown were advanced on September 1-3, 2015.



Project Mngr: RLB	Project No. ES157077	Terracon Consulting Engineers & Scientists	SOIL QUALITY MAP - VOC AND SVOC DETECTIONS
Drawn By: JCM	Scale: 1" = 200'	2201 Rowland Avenue Savannah, Georgia 31404	Axeon Specialty Products
Checked By: RLB	File Name: ES157077.dwg	Phone (912) 629 4000 Fax. (912) 629 4001	Savannah Plant
Approved By: WSA	Date: December 1, 2015		7 Foundation Drive
			Savannah, Chatham County, Georgia

Figure 3B

EXPLANATION

- DIRECT PUSH BORING LOCATION
- EXISTING MONITORING WELL
- POINT OF DEMONSTRATION WELL
- SUBTERRANEAN POLY-WALL
- APPROXIMATE PROPERTY BOUNDARY
- EARTHEN BERM
- EXISTING BUILDING
- PAVED ROAD
- RAILROAD LINE
- FENCE LINE

AW-25 ← SAMPLE ID	
8/19/2015 ← SAMPLE DATE	
As	0.708 ← ARSENIC CONCENTRATION
Ba	6.70 ← BARIUM CONCENTRATION
Cd	1.96 ← CADMIUM CONCENTRATION
Cr	2.5 ← CHROMIUM CONCENTRATION
Pb	23.2 ← LEAD CONCENTRATION
Se	4.1 ← SELENIUM CONCENTRATION
Ag	0.05 ← SILVER CONCENTRATION
Hg	0.006 ← MERCURY CONCENTRATION

Notes:
Concentrations in milligrams per liter (mg/L). Filter sample results indicated in parenthesis.

Concentrations in excess of the Georgia EPD Appendix III Notification Criteria are indicated in **BLACK.**
Concentrations in excess of the Type 3 Risk Reduction Standards are indicated in **RED.**

Map Features generated using the site plan for NuStar Savannah Refinery created by Ash Creek Associates in August 2012 and a site survey completed by Hussey Gay Bell & DeYoung in April 2015, both provided to Terracon by Axeon Specialty Products. Pertinent tanks and pipe runs are shown, however some buildings, piping, and/or process areas are not included in this figure. The direct push boring locations shown were advanced on September 1-3, 2015.

N

COLONIAL TERMINALS PROPERTY

INTERNATIONAL PAPER PROPERTY

SAVANNAH RIVER

AW-25 8/19/2015	
As	<0.010
Ba	0.0271
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-31 8/19/2015	
As	<0.010
Ba	0.0298
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-72 8/19/2015	
As	<0.010
Ba	0.0301
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-41 8/19/2015	
As	<0.010
Ba	0.0375
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-48 8/19/2015	
As	<0.010
Ba	0.0327
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-44 8/19/2015	
As	<0.010 (<0.010)
Ba	0.0584 (0.0539)
Cd	<0.0050 (<0.0050)
Cr	<0.010 (<0.010)
Pb	**0.0531** (<0.0050)
Se	<0.010 (<0.010)
Ag	<0.010 (<0.010)
Hg	<0.200 (<0.200)

AW-44 10/30/2015	
As	<0.010 (<0.010)
Ba	0.044 (0.0432)
Cd	<0.0050 (<0.0050)
Cr	<0.010 (<0.010)
Pb	<0.0050 (<0.0050)
Se	<0.010 (<0.010)
Ag	<0.010 (<0.010)
Hg	<0.200 (<0.200)

AW-37 8/19/2015	
As	**0.0134**
Ba	0.0150
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-37 10/30/2015	
As	**0.0196** (<0.010)
Ba	0.0303 (0.0230)
Cd	<0.0050 (<0.0050)
Cr	<0.010 (<0.010)
Pb	<0.0050 (<0.0050)
Se	<0.010 (<0.010)
Ag	<0.010 (<0.010)
Hg	<0.200 (<0.200)

AW-67 8/19/2015	
As	**0.0131**
Ba	0.0351
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

AW-67 10/30/2015	
As	**0.121** (<0.010)
Ba	0.0539 (0.0473)
Cd	<0.0050 (<0.0050)
Cr	<0.010 (<0.010)
Pb	<0.0050 (<0.0050)
Se	<0.010 (<0.010)
Ag	<0.010 (<0.010)
Hg	<0.200 (<0.200)

AW-67 8/19/2015	
As	<0.010 (<0.010)
Ba	0.118 (0.107)
Cd	<0.0050 (<0.0050)
Cr	<0.010 (<0.010)
Pb	<0.0050 (<0.0050)
Se	<0.010 (<0.010)
Ag	<0.010 (<0.010)
Hg	<0.200 (<0.200)

AW-71 8/19/2015	
As	<0.010
Ba	0.0299
Cd	<0.0050
Cr	<0.010
Pb	<0.0050
Se	<0.010
Ag	<0.010
Hg	<0.200

0 100' 200'
1" = 200'
APPROXIMATE SCALE IN FEET

Project Mngr:	RLB	Project No.	ES157077
Drawn By:	JCM	Scale:	1" = 200'
Checked By:	RLB	File Name:	ES157077.dwg
Approved By:	WSA	Date:	December 1, 2015

Terracon Consulting Engineers & Scientists
2201 Rowland Avenue, Savannah, Georgia 31404
Phone (912) 629 4000, Fax. (912) 629 4001

GROUNDWATER QUALITY MAP - RCRA METALS

Axeon Specialty Products
Savannah Plant
7 Foundation Drive
Savannah, Chatham County, Georgia

Figure 4A

EXPLANATION

- DIRECT PUSH BORING LOCATION
- EXISTING MONITORING WELL
- POINT OF DEMONSTRATION WELL
- SUBTERRANEAN POLY-WALL
- APPROXIMATE PROPERTY BOUNDARY
- EARTHEN BERM
- EXISTING BUILDING
- PAVED ROAD
- RAILROAD LINE
- FENCE LINE

AW-25 ← SAMPLE ID	
8/19/2015 ← SAMPLE DATE	
BENZENE	0.708 ← BENZENE CONCENTRATION
CARBON DISULFIDE	6.70 ← CARBON DISULFIDE CONCENTRATION
ETHYLBENZENE	1.96 ← ETHYLBENZENE CONCENTRATION
FLUORENE	2.5 ← FLUORENE CONCENTRATION
NAPHTHALENE	23.2 ← NAPHTHALENE CONCENTRATION
TOLUENE	4.1 ← TOLUENE CONCENTRATION
XYLENES	0.05 ← XYLENES CONCENTRATION
1,2-DCA	0.006 ← 1,2-DICHLOROETHANE CONCENTRATION

Notes:
Concentrations in micrograms per liter (µg/L).

Concentrations in excess of the Georgia EPD Appendix III Notification Criteria are indicated in **BLACK**.
Concentrations in excess of the Type 3 Risk Reduction Standards are indicated in **RED**.

Map Features generated using the site plan for NuStar Savannah Refinery created by Ash Creek Associates in August 2012 and a site survey completed by Hussey Gay Bell & DeYoung in April 2015, both provided to Terracon by Axeon Specialty Products. Pertinent tanks and pipe runs are shown, however some buildings, piping, and/or process areas are not included in this figure. The direct push boring locations shown were advanced on September 1-3, 2015.

N

COLONIAL TERMINALS PROPERTY

INTERNATIONAL PAPER PROPERTY

SAVANNAH

AW-25 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

AW-31 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

TW-9 9/2/2015	
BENZENE	4.76
CARBON DISULFIDE	<1
ETHYLBENZENE	45.6
FLUORENE	238
NAPHTHALENE	1,450
TOLUENE	<1
XYLENES	363
1,2-DCA	<1

AW-72 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

TW-3 9/2/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	1.29

AW-41 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

TW-4 9/3/2015	
BENZENE	<5.00
CARBON DISULFIDE	<5.00
ETHYLBENZENE	<25.0
FLUORENE	<10
NAPHTHALENE	<25
TOLUENE	<5.00
XYLENES	<15
1,2-DCA	<5.00

AW-44 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

AW-41 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

TW-6 9/1/2015	
BENZENE	24.6
CARBON DISULFIDE	<1
ETHYLBENZENE	217
FLUORENE	<10
NAPHTHALENE	135
TOLUENE	4.83
XYLENES	16.35
1,2-DCA	<1

AW-37 8/19/2015	
BENZENE	24
CARBON DISULFIDE	<1
ETHYLBENZENE	52.3
FLUORENE	<10
NAPHTHALENE	41.2
TOLUENE	3.55
XYLENES	2.67
1,2-DCA	<1

TW-8 9/1/2015	
BENZENE	335
CARBON DISULFIDE	<5.00
ETHYLBENZENE	246
FLUORENE	<10
NAPHTHALENE	68.5
TOLUENE	575
XYLENES	676
1,2-DCA	<5.00

AW-77 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

TW-11 9/3/2015	
BENZENE	<1
CARBON DISULFIDE	1.49
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	16.2
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

AW-71 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	1.05
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

AW-67 8/19/2015	
BENZENE	<1
CARBON DISULFIDE	<1
ETHYLBENZENE	<1
FLUORENE	<10
NAPHTHALENE	<5.00
TOLUENE	<1
XYLENES	<3
1,2-DCA	<1

0 100' 200'
1" = 200'
APPROXIMATE SCALE IN FEET

Project Mngr:	RLB
Drawn By:	JCM
Checked By:	RLB
Approved By:	WSA
Project No.	ES157077
Scale:	1" = 200'
File Name:	ES157077.dwg
Date:	December 1, 2015

Terracon
Consulting Engineers & Scientists
2201 Rowland Avenue Savannah, Georgia 31404
Phone (912) 629 4000 Fax. (912) 629 4001

GROUNDWATER QUALITY MAP - VOC AND SVOC DETECTIONS

Axeon Specialty Products
Savannah Plant
7 Foundation Drive
Savannah, Chatham County, Georgia

Figure 4B

APPENDIX B

DATA TABLES

Axeon Savannah Terminal

7 Foundation Drive

Savannah, Chatham County, Georgia

Table 1A: SOIL ANALYTICAL RESULTS - RCRA METALS

Sample Location	Depth (feet)	Date Sampled	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Mercury (mg/kg)
TW-1	3 - 4	9/1/2015	5.51	30	<0.540	16.8	45.7	<1.10	<1.10	0.293
TW-2	0 - 1	9/1/2015	4.46	27.2	<0.740	23.3	11.0	<1.50	<1.50	0.0604
TW-3	3 - 4	9/2/2015	1.84	20.2	<0.590	13.3	10.4	<1.20	<1.20	<0.0500
TW-4	2 - 3	9/3/2015	<1.10	15.5	<0.530	2.66	11.4	<1.10	<1.10	0.0980
TW-6	10 - 12	9/1/2015	1.88	42.2	<0.600	14.3	7.39	<1.20	<1.20	<0.0500
TW-7	2 - 3	9/2/2015	1.06	23.3	<0.480	2.69	6.46	<1.00	<1.00	<0.0400
TW-8	8 - 10	9/1/2015	2.84	38.8	<0.650	13.30	14.1	<1.30	<1.30	<0.0500
TW-9	3 - 4	9/2/2015	1.22	20.4	<0.550	2.4	14.3	<1.10	<1.10	<0.0500
TW-10	7 - 8	9/3/2015	2.28	24.2	<0.630	11.1	18.7	<1.30	<1.30	<0.0500
TW-11	8 - 9	9/3/2015	1.30	56.7	<0.590	8.13	3.9	<1.20	<1.20	<0.0500
Appendix I Notification Concentration			41	500	39	1200	400	36	10	17

Prepared by: Luke Bragg Date: 11/20/15

Reviewed by: Stewart A. Dixon, P.G. Date: 11/20/15

NOTES:

< = Analyte was not detected at the indicated laboratory reporting limit.

Bold = Concentration Exceeds Applicable Standard

Axeon Savannah Terminal

7 Foundation Drive

Savannah, Chatham County, Georgia

Table 1B: SOIL ANALYTICAL RESULTS - VOC AND SVOC DETECTIONS†

Sample Location	Depth (feet)	Date Sampled	Acetone (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Isopropylbenzene (mg/kg)	MEK (mg/kg)	Naphthalene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
TW-1	3 - 4	9/1/2015	0.0905	<0.00430	<0.00430	<0.00430	0.0364	0.00458	<0.00430	<0.00900
TW-2	0 - 1	9/1/2015	<0.00650	<0.00650	<0.00650	<0.00650	<0.0330	<0.00650	<0.00650	<0.0130
TW-3	3 - 4	9/2/2015	<8.65	<0.173	0.950	1.32	<1.73	3.25	<0.173	<0.346
TW-4	2 - 3	9/3/2015	<0.0470	<0.00470	<0.00470	<0.00470	<0.0230	<0.00470	<0.00470	0.0199
TW-6	10 - 12	9/1/2015	<8.80	<0.176	7.53	1.22	<1.76	6.37	1.60	15.0
TW-7	2 - 3	9/2/2015	<0.0430	<0.00430	<0.00430	<0.00430	0.0338	<0.00430	<0.00430	<0.00900
TW-8	8 - 10	9/1/2015	<0.0540	<0.00540	<0.00540	<0.00540	<0.022	<0.00540	<0.00540	<0.0110
TW-9	3 - 4	9/2/2015	0.0769	<0.00530	<0.00530	<0.00530	<0.0260	<0.00530	<0.00530	<0.0110
TW-10	7 - 8	9/3/2015	<0.0470	<0.00470	<0.00470	<0.00470	<0.0230	<0.00470	<0.00470	<0.00900
TW-11	8 - 9	9/3/2015	<2.03	<0.203	<0.203	16.9	1.07	7.60	<0.203	<0.407
Appendix I Notification Concentration			2.74	0.02	20	21.88	0.79	100	14.40	20
Type 3 Risk Reduction Standard			N/A	N/A	N/A	N/A	200	N/A	N/A	N/A

Prepared by: Luke Bragg Date: 11/20/15

Reviewed by: Stewart A. Dixon, P.G. Date: 11/20/15

NOTES:

† Analytes with Georgia EPD Appendix I Notification Concentrations

< = Analyte was not detected at the indicated laboratory reporting limit.

Bold = Concentration Exceeds Applicable Standard

Axeon Savannah Terminal

7 Foundation Drive

Savannah, Chatham County, Georgia

Table 2A: GROUNDWATER ANALYTICAL RESULTS - RCRA METALS

Sample Location	Date Sampled	Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Selenium (mg/L)	Silver (mg/L)	Mercury (mg/L)
AW-25	8/19/2015	<0.010	0.0271	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-31	8/19/2015	<0.010	0.0298	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-37	8/19/2015	**0.0134**	0.0150	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
	10/30/2015	**0.0196**	0.0303	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-37 (filter)	10/30/2015	<0.010	0.0230	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-41	8/19/2015	<0.010	0.0375	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-44	8/19/2015	<0.010	0.0584	<0.0050	<0.010	**0.0531**	<0.010	<0.010	<0.200
	10/30/215	<0.010	0.044	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-44 (filter)	8/19/2015	<0.010	0.0539	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
	10/30/2015	<0.010	0.0432	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-48	8/19/2015	<0.010	0.0327	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-67	8/19/2015	**0.0131**	0.0351	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
	10/30/2015	**0.0121**	0.0539	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-67 (filter)	10/30/2015	<0.010	0.0473	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-71	8/19/2015	<0.010	0.0299	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-72	8/19/2015	<0.010	0.0301	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-77	8/19/2015	<0.010	0.118	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
AW-77 (filter)	8/19/2015	<0.010	0.107	<0.0050	<0.010	<0.0050	<0.010	<0.010	<0.200
Appendix III Notification Concentration		0.010	2	0.005	0.1	0.015	0.05	0.1	0.002
Type 3 Risk Reduction Standard		0.010	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Prepared by: Luke Bragg Date: 11/20/15

Reviewed by: Stewart A. Dixon, P.G. Date: 11/20/15

NOTES:

< = Analyte was not detected at the indicated laboratory reporting limit.

Bold = Concentration Exceeds Applicable Standard

Axeon Savannah Terminal

7 Foundation Drive

Savannah, Chatham County, Georgia

Table 2B: GROUNDWATER ANALYTICAL RESULTS - VOC AND SVOC DETECTIONS†

Sample Location	Date Sampled	Benzene (µg/L)	Carbon Disulfide (µg/L)	Ethylbenzene (µg/L)	Fluorene (µg/L)	Naphthalene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	1,2-Dichloroethane (µg/L)
AW-25	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-31	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-37	8/19/2015	**24**	<1	52.3	<10	**41.2**	3.55	2.67	<1
AW-41	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-44	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-48	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-67	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-71	8/19/2015	<1	1.05	<1	<10	<5.00	<1	<3	<1
AW-72	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
AW-77	8/19/2015	<1	<1	<1	<10	<5.00	<1	<3	<1
TW-3	9/2/2015	<1	<1	<1	<10	<5.00	<1	<3	1.29
TW-4	9/3/2015	<5.00	<5.00	<25.0	<10	<25	<5.00	<15	<5.00
TW-6	9/1/2015	**24.6**	<1	217	<10	**135**	4.83	16.35	<1
TW-8	9/1/2015	**335**	<5.00	246	<10	**68.5**	575.0	676	<5.00
TW-9	9/2/2015	4.76	<1	45.6	238	**1,450**	<1	363	<1
TW-11	9/3/2015	<1	1.49	<1	<10	16.2	<1	<3	<1
Appendix III Notification Concentration		5	4,000	700	1,000	20	1,000	10,000	5
Type 3 Risk Reduction Standard		5	N/A	N/A	N/A	20	N/A	N/A	N/A

Prepared by: Luke Bragg Date: 11/20/15

Reviewed by: Stewart A. Dixon, P.G. Date: 11/20/15

NOTES:

† Analytes with Georgia EPD Appendix III Notification Concentrations

< = Analyte was not detected at the indicated laboratory reporting limit.

Bold = Concentration Exceeds Applicable Standard

APPENDIX C

LABORATORY ANALYTICAL DATA

Serial Number: 75129

Avery Laboratories & Environmental Services, LLC

Ship To: 2720 Gregory St. , Unit 200 Savannah, Ga. 31404
T 912 944-3748 F 912 234-9294
email: pgrimm@averylab.com

1511020
LAB NUMBER

Client Information		Page 1 of 1	Project Name: Axeon	Subcontract Laboratory
Customer:	Terracon	Sampler: SCY	Project Number: ES157043 State where work originated: GA	Name / Address/ Phone
Address:	2201 Rowland Ave	Turn Around Time (Place X below)		N
City/State/Zip:	Savannah GA	24 Hours		A
Contact:	Luke Braggs	48 Hours		
Phone:	912 700 9112	72 Hours		P
Email:	Luke.Braggs@Terracon.com	5 Working Days		
Purchase Order #:	ES157043	7 Working Days	✓	
Project Manager:	Luke Braggs	Other:		

Sample Identification	Date	Time	Matrix	# of Containers	RCRA Total	RCRA Dissolved	Preservative	Remarks
AW 37	10/30/15	1515	W	2	X	X		
AW 44	↓	1610	↓	↓	↓	↓		
AW 67	↓	1425	↓	↓	↓	↓		

Matrix Type: A = Air W = Water S= Solid N = Nonaqueous (solvent, acid, etc.)

Preservative: 1= None 2 = H2SO4 3 = HN03 4 = HCL 5 = MeOH 6 = NAHSO4 7 = Water 8 = Sodium Bisulfate 9 = Other

Instructions or Special Requirements:

Temperature: 2.5 Custody Seals: Yes No Custody Seals Intact: Yes No

Relinquished by:	Date/Time: 11/2/15 1055		Received by:	Date/Time: 11-2-15 10:
Relinquished by:	Date/Time:		Received by:	Date/Time:
Relinquished by:	Date/Time:		Received by:	Date/Time:

F86-02

Effective Date: 09.15.15

RP15111003

RP15111003

LABORATORY ANALYSIS REPORT

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Job ID : 15110207

Client Project ID :
Axeon

Report To : Client Name: Terracon Attn: Luke Bragg
Client Address: 2201 Rowland Ave. P.O.#.:
City, State, Zip: Savannah, GA, 31404

Dear Luke Bragg

The following test results meet all NELAP requirements for analytes for which certification is available. Any deviations from these quality systems will be noted in this case narrative. All analyses performed by Avery Laboratories & Environmental Services, LLC unless noted. Parameters not perfromed by Avery Laboratories will be listed on the Sample Summary section of the report.

For questions regarding this report, contact Robert Paul Grimm at (912)944-3748.

Sincerely,

This Laboratory is NELAP accredited.

I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory data package has been reviewed and is complete and technically compliant with the requirements of the methods used, except where noted in the attached exception reports. I affirm, to the best of my knowledge that all problems/anomalies observed by this laboratory (and if applicable, any and all laboratories subcontracted through this laboratory) that might affect the quality of the data, have been identified in the Laboratory Review Checklist, and that no information or data have been knowingly withheld that would affect the quality of the data.

Date: 11/10/2015 20:19

Primary Accreditation State and Number: Florida E87941

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 37	Date Collected:	10/30/2015
Job Sample ID:	15110207.01	Time Collected:	15:15
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW6010c	**ICP Metals-Aqueous**							
	Arsenic	0.0196	mg/L	1	0.010		11/09/2015 15:56	CW
	Barium	0.0303	mg/L	1	0.010		11/09/2015 15:56	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 15:56	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 15:56	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 15:56	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 15:56	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 15:56	CW
SW7470a	**Mercury-Aqueous**							
	Mercury	BRL	ug/L	1	0.200		11/06/2015 13:53	CW

Date: 11/10/2015 20:19

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 44	Date Collected:	10/30/2015
Job Sample ID:	15110207.02	Time Collected:	16:10
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW6010c	**ICP Metals-Aqueous**							
	Arsenic	BRL	mg/L	1	0.010		11/09/2015 16:01	CW
	Barium	0.0440	mg/L	1	0.010		11/09/2015 16:01	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 16:01	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 16:01	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 16:01	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 16:01	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 16:01	CW
SW7470a	**Mercury-Aqueous**							
	Mercury	BRL	ug/L	1	0.200		11/06/2015 13:55	CW

Date: 11/10/2015 20:19

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 67	Date Collected:	10/30/2015
Job Sample ID:	15110207.03	Time Collected:	14:25
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
SW6010c	**ICP Metals-Aqueous**							
	Arsenic	0.0121	mg/L	1	0.0100		11/09/2015 16:31	CW
	Barium	0.0539	mg/L	1	0.010		11/09/2015 16:31	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 16:31	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 16:31	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 16:31	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 16:31	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 16:31	CW
SW7470a	**Mercury-Aqueous**							
	Mercury	BRL	ug/L	1	0.200		11/06/2015 13:58	CW

Date: 11/10/2015 20:19

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 37 (Filtered)	Date Collected:	10/30/2015
Job Sample ID:	15110207.04	Time Collected:	15:15
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
EPA 245.1	**Mercury - Dissolved**							
	Mercury	BRL	ug/L	1	0.20		11/06/2015 12:39	CW
SW6010c (Dissolved)	**Dissolved Metals**							
	Arsenic	BRL	mg/L	1	0.010		11/09/2015 14:22	CW
	Barium	0.0230	mg/L	1	0.010		11/09/2015 14:22	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 14:22	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 14:22	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 14:22	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 14:22	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 14:22	CW

Date: 11/10/2015 20:19

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 44 (Filtered)	Date Collected:	10/30/2015
Job Sample ID:	15110207.05	Time Collected:	16:10
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
EPA 245.1	**Mercury - Dissolved**							
	Mercury	BRL	ug/L	1	0.20		11/06/2015 12:47	CW
SW6010c (Dissolved)	**Dissolved Metals**							
	Arsenic	BRL	mg/L	1	0.010		11/09/2015 14:27	CW
	Barium	0.0432	mg/L	1	0.010		11/09/2015 14:27	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 14:27	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 14:27	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 14:27	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 14:27	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 14:27	CW

Date: 11/10/2015 20:19

RP15111003

CLIENT SAMPLE RESULTS

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project ID:	Axeon	Date:	11/10/2015

Job ID :	15110207	Sample Matrix:	Aqueous
Client Sample ID:	AW 67 (Filtered)	Date Collected:	10/30/2015
Job Sample ID:	15110207.06	Time Collected:	14:25
Other Information:			

Test Method	Parameter	Result	Units	DF	RL	Q	Date/Time Analyzed	Analyst
EPA 245.1	**Mercury - Dissolved**							
	Mercury	BRL	ug/L	1	0.20		11/06/2015 12:49	CW
SW6010c (Dissolved)	**Dissolved Metals**							
	Arsenic	BRL	mg/L	1	0.010		11/09/2015 14:31	CW
	Barium	0.0473	mg/L	1	0.010		11/09/2015 14:31	CW
	Cadmium	BRL	mg/L	1	0.0050		11/09/2015 14:31	CW
	Chromium	BRL	mg/L	1	0.010		11/09/2015 14:31	CW
	Lead	BRL	mg/L	1	0.0050		11/09/2015 14:31	CW
	Selenium	BRL	mg/L	1	0.010		11/09/2015 14:31	CW
	Silver	BRL	mg/L	1	0.010		11/09/2015 14:31	CW

RP15111003

QUALITY CONTROL DATA

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: **ICP Metals-Aqueous** **Method:** **SW6010c** **Reporting Units:** **mg/L**

QC Batch ID: Qb15110402 **Created Date:** 11/04/2015 08:23 **Created By:** CWaller

Samples in this QC Batch: 15110207,01,02,03

Digestion	PB15110402	SW3005a	CWaller

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Arsenic	7440-38-2	BRL	mg/L	1	0.010		
Method Blank	Barium	7440-39-3	BRL	mg/L	1	0.010		
Method Blank	Cadmium	7440-43-9	BRL	mg/L	1	0.0050		
Method Blank	Chromium	7440-47-3	BRL	mg/L	1	0.010		
Method Blank	Lead	7439-92-1	BRL	mg/L	1	0.0050		
Method Blank	Selenium	7782-49-2	BRL	mg/L	1	0.010		
Method Blank	Silver	7440-22-4	BRL	mg/L	1	0.010		

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Arsenic	0.20	0.184	92.0	0.20	0.191	95.5	3.70	20	80-120	
Barium	0.20	0.206	103.0	0.20	0.212	106.0	3.10	20	80-120	
Cadmium	0.20	0.188	94.0	0.20	0.196	98.3	4.40	20	80-120	
Chromium	0.20	0.194	97.3	0.20	0.202	101.0	3.80	20	80-120	
Lead	0.20	0.192	96.1	0.20	0.202	101.0	5.20	20	80-120	
Selenium	0.20	0.180	90.2	0.20	0.187	93.5	3.60	20	80-120	
Silver	0.20	0.201	101.0	0.20	0.206	103.0	2.20	20	80-120	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	15110208.01	Arsenic	BRL	0.20	0.238	108	0.20	0.216	96.5	10.00	20	80-120	
MS	15110208.01	Barium	0.175	0.20	0.376	100	0.20	0.382	103	1.60	20	80-120	
MS	15110208.01	Cadmium	BRL	0.20	0.204	102	0.20	0.201	100	1.60	20	80-120	
MS	15110208.01	Chromium	BRL	0.20	0.217	102	0.20	0.220	103	1.20	20	80-120	
MS	15110208.01	Lead	BRL	0.20	0.205	102	0.20	0.193	96.5	5.90	20	80-120	
MS	15110208.01	Selenium	BRL	0.20	0.185	92.5	0.20	0.207	104	11.30	20	80-120	
MS	15110208.01	Silver	BRL	0.20	0.192	96.1	0.20	0.198	99.2	3.10	20	80-120	

Refer to the Definition page for terms.

RP15111003

QUALITY CONTROL DATA

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: **Dissolved Metals** **Method:** **SW6010c (Dissolved)** **Reporting Units:** **mg/L**

QC Batch ID: Qb15110403 **Created Date:** 11/04/2015 08:26 **Created By:** CWaller

Samples in this QC Batch: 15110207,04,05,06

Digestion	PB15110403	SW3005a	CWaller

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Arsenic	7440-38-2	BRL	mg/L	1	0.010		
Method Blank	Barium	7440-39-3	BRL	mg/L	1	0.010		
Method Blank	Cadmium	7440-43-9	BRL	mg/L	1	0.0050		
Method Blank	Chromium	7440-47-3	BRL	mg/L	1	0.010		
Method Blank	Lead	7439-92-1	BRL	mg/L	1	0.0050		
Method Blank	Selenium	7782-49-2	BRL	mg/L	1	0.010		
Method Blank	Silver	7440-22-4	BRL	mg/L	1	0.010		

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Arsenic	0.20	0.195	97.5	0.20	0.184	92.0	5.80	20	80-120	
Barium	0.20	0.213	107.0	0.20	0.200	100.0	6.30	20	80-120	
Cadmium	0.20	0.198	99.0	0.20	0.186	93.0	6.30	20	80-120	
Chromium	0.20	0.200	100.0	0.20	0.190	95.0	5.10	20	80-120	
Lead	0.20	0.203	102.0	0.20	0.190	95.0	6.60	20	80-120	
Selenium	0.20	0.186	93.0	0.20	0.181	90.5	2.70	20	80-120	
Silver	0.20	0.206	103.0	0.20	0.196	98.0	5.00	20	80-120	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	15110208.02	Arsenic	0.0211	0.20	0.213	96.0	0.20	0.211	95.0	0.90	20	80-120	
MS	15110208.02	Barium	0.0129	0.20	0.219	103	0.20	0.224	106	2.30	20	80-120	
MS	15110208.02	Cadmium	BRL	0.20	0.199	99.3	0.20	0.198	98.8	0.50	20	80-120	
MS	15110208.02	Chromium	0.0181	0.20	0.221	101	0.20	0.219	100	0.90	20	80-120	
MS	15110208.02	Lead	BRL	0.20	0.198	97.4	0.20	0.198	97.4	0.00	20	80-120	
MS	15110208.02	Selenium	BRL	0.20	0.187	92.8	0.20	0.193	95.8	3.20	20	80-120	
MS	15110208.02	Silver	BRL	0.20	0.203	102	0.20	0.205	103	1.00	20	80-120	

Refer to the Definition page for terms.

RP15111003

QUALITY CONTROL DATA

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: **Mercury - Dissolved** **Method:** **EPA 245.1** **Reporting Units:** **ug/L**

QC Batch ID: Qb15110503 **Created Date:** 11/05/2015 00:00 **Created By:** CWaller

Samples in this QC Batch: 15110207,04,05,06

Digestion	PB15110503	EPA 245.1	CWaller

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Mercury	7439-97-6	BRL	ug/L	1	0.20	0.09	

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Mercury	5.00	4.52	90.4	5.0	4.66	93.2	3.10	15	80-120	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	15110207.06	Mercury	BRL	5.0	4.53	90.5	5.0	4.43	88.5	2.20	30	70-130	

Refer to the Definition page for terms.

RP15111003

QUALITY CONTROL DATA

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Analysis: **Mercury-Aqueous** **Method:** **SW7470a** **Reporting Units:** **ug/L**

QC Batch ID: Qb15110504 **Created Date:** 11/05/2015 10:59 **Created By:** CWaller

Samples in this QC Batch: 15110207,01,02,03

Digestion	PB15110504	SW7470a	CWaller

QC Type: Method Blank

	Parameter	CAS	Result	Units	DF	RL	MDL	Qual
Method Blank	Mercury	7439-97-6	BRL	ug/L	1	0.20	0.09	

QC Type: LCS/LCSD

Parameter	LCS Spk Amt	LCS Result	LCS % Rec	LCSD Spk Amt	LCSD Result	LCS % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
Mercury	5.0	4.81	96.2	5.0	4.96	99.1	3.00	20	80-120	

QC Type: MS/MSD

	QC Sample ID	Parameter	Sample Result	MS Spk Amt	MS Result	MS % Rec	MS Spk Amt	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	% Rec CtrlLimit	Qual
MS	15110502.04	Mercury	BRL	5.0	4.66	93.2	5.0	4.65	92.9	0.30	20	80-120	

Refer to the Definition page for terms.

RP15111003

CASE NARRATIVE

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon
Project ID:	Axeon
Date Received:	11/02/2015
Collected By:	SCY

There were no analytical problems encountered. All results and quality control were within the laboratory's established limits.

Released By: PGrimm

Title: Technical Director

TERM AND QUALIFIER DEFINITION

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

General Term Definition

Conc.	Concentration
DF	Dilution Factor - the factor applied to the reported data due to sample preparation, dilution, or moisture content
ND	Non Detect - Not Detected at or above adjusted reporting limit
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
RL	adjusted Reporting Limit (QL – Quantification Limit)
MDL	adjusted Method Detection Limit (LOD – Limit of Detection)
RegLimit	Regulatory Limit
mg/l	Milligrams per Liter
mg/kg	Milligrams per Kilogram
ppm	Parts per Million
µg/L	Micrograms per Liter
µg/g	Micrograms per Gram
ppb	Parts per Billion
gr/gal	Grains per Gallon
SU	Standard Units
CCU	Cobalt Color Units
NTU	Nephelometric Turbidity Units
µS/cm	Microsiemens per cm at 25C
P/A	Presence/Absence
CFU	Colony Forming Units
MPN	Most Probable Number
RB	Reagent Blank
MB	Method Blank
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LFM	Laboratory Fortified Matrix (MS – Matrix Spike)
LFMD	Laboratory Fortified Matrix Duplicate (MSD – Matrix Spike Duplicate)
DUP	Sample Duplicate
RPD	Relative Percent Difference
%Rec	Percent Recovery
TNTC	Too numerous to count
NC	Not Calculable
SG	Silica Gel - Clean-Up
BRL	Below Reporting Limit
BDL	Below Detection Limit

Qualifier Definition

RP15111003

SAMPLE SUMMARY

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Project ID :
Axeon

Report To : Client Name: Terracon Attn: Luke Bragg
Client Address: 2201 Rowland Ave. P.O.#.:
City, State, Zip: Savannah, GA, 31404

The laboratory has analyzed the following samples:

Client Sample ID	Matrix	Sample ID	Date Received	Date Collected	Collected by
AW 37	Aqueous	15110207.01	11/2/2015 10:55	10/30/2015 15:15	SCY
AW 44	Aqueous	15110207.02	11/2/2015 10:55	10/30/2015 16:10	SCY
AW 67	Aqueous	15110207.03	11/2/2015 10:55	10/30/2015 14:25	SCY
AW 37 (Filtered)	Aqueous	15110207.04	11/2/2015 10:55	10/30/2015 15:15	SCY
AW 44 (Filtered)	Aqueous	15110207.05	11/2/2015 10:55	10/30/2015 16:10	SCY
AW 67 (Filtered)	Aqueous	15110207.06	11/2/2015 10:55	10/30/2015 14:25	SCY

Date: 11/10/2015 20:19

RP15111003

SAMPLE PREPARATION INFORMATION

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name:	Terracon	Attn:	Luke Bragg
Project Name:	Axeon	Date:	11/10/2015

Sample ID	Test	Prep Method	Date Prepared	Analyst	Prep Batch ID
15110207.01	ICP-6010c	SW3005a	11/04/2015 08:22	CWaller	PB15110402
15110207.01	Mercury Liquid	SW7470a	11/05/2015 10:58	CWaller	PB15110504
15110207.02	ICP-6010c	SW3005a	11/04/2015 08:22	CWaller	PB15110402
15110207.02	Mercury Liquid	SW7470a	11/05/2015 10:58	CWaller	PB15110504
15110207.03	ICP-6010c	SW3005a	11/04/2015 08:22	CWaller	PB15110402
15110207.03	Mercury Liquid	SW7470a	11/05/2015 10:58	CWaller	PB15110504
15110207.04	ICP-6010c Dissolved	SW3005a	11/04/2015 08:25	CWaller	PB15110403
15110207.04	Mercury Dissolved	EPA 245.1	11/05/2015 10:56	CWaller	PB15110503
15110207.05	ICP-6010c Dissolved	SW3005a	11/04/2015 08:25	CWaller	PB15110403
15110207.05	Mercury Dissolved	EPA 245.1	11/05/2015 10:56	CWaller	PB15110503
15110207.06	ICP-6010c Dissolved	SW3005a	11/04/2015 08:25	CWaller	PB15110403
15110207.06	Mercury Dissolved	EPA 245.1	11/05/2015 10:56	CWaller	PB15110503

RP15111003

SAMPLE CONDITION CHECKLIST

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Client Name : Terracon		**Contact :** Luke Bragg
Client Address : 2201 Rowland Ave.		**Contact Phone :** 912-629-4000
JobID : 15110207	**Date Received :** 11/02/2015	**Time Received :** 10:55 AM
Temperature : 2.5	**Sample pH :** ok	
ThermometerID : 15953	**pHPaperID :** 4113	

Comments : Include actions taken to resolve discrepancies/problem:

pH out of range for all samples

	Check Points	Yes	No	N/A
1	Bottle count on C-O-C matches bottle found.	✔		
2	C-O-C signed and dated.	✔		
3	Cooler seal present and signed.	✔		
4	If requested, sample(s) received with signed sample custody seal			✔
5	Sample amount is sufficient for analyses requested	✔		
6	Sample containers arrived in tact. (if no, comment)	✔		
7	Sample ID lables Match C-O-C ID's	✔		
8	Sample received at 6°C or Less	✔		
9	Sample(s) in a cooler.	✔		
10	Sample(s) were received at the proper pH.		✔	
11	Sample(s) were received in appropriate contatiner. (If no, comment)	✔		
12	Samples accepted.	✔		
13	Samples received within holding time for analysis requested	✔		
14	Zero headspace in liquid VOA vials			✔

CheckIn By : Elizabeth Grimm CheckIn Date : 11/02/2015

Date: 11/10/2015 20:19

RP15111003

COMMERCIAL LABORATORY STIPULATION

Georgia Rules for Commercial Environmental Laboratory Accreditation
Chapter 391-3-26

Job ID : 15110207

Avery Laboratories & Environmental Services, LLC

2720 Gregory St. Unit 200 Savannah, Georgia 31404 Tel: (912) 944-3748 Fax: (912) 234-9294

Laboratory:	Avery Laboratories and Environmental Services, LLC
Accreditor:	NELAC: State of Florida, Department of Health, Bureau of Laboratories
Accreditation ID:	E87941
Scope:	NON-POTABLE WATER - EXTRACTABLE ORGANICS, NON-POTABLE WATER - GENERAL CHEMISTRY, NON-POTABLE WATER - METALS, NON-POTABLE WATER - PESTICIDES-HERBICIDES-PCB'S, NON-POTABLE WATER - VOLATILE ORGANICS, SOLID AND CHEMICAL MATERIALS - EXTRACTABLE ORGANICS, SOLID AND CHEMICAL MATERIALS - GENERAL CHEMISTRY, SOLID AND CHEMICAL MATERIALS - METALS, SOLID AND CHEMICAL MATERIALS - VOLATILE ORGANICS
Effective Date:	July 1, 2015 **Expiration Date:** July 1, 2016

As per the Georgia EPD Rules and Regulations for Commercial Laboratories, Avery Laboratories and Environmental Services - Savannah is accredited by the Florida Department of Health under the National Environmental Laboratory Approval Program (NELAP). If you have any further questions regarding accreditation status for Avery Laboratories and Environmental Services, please contact: Paul Grimm.

Avery Laboratories and Environmental Services, LLC
101B Estus Drive
Savannah, GA 31404
Phone: (912) 944-3748
Fax: (912) 234-9294

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

December 01, 2015

Paul Grimm
Avery Laboratories Environmental
101 B Estus Dr.
Savannah, GA 31404

RE: Project: Axeon ES137043
Pace Project No.: 92275382

Dear Paul Grimm:
Enclosed are the analytical results for sample(s) received by the laboratory on November 10, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

This report was revised on 11/19/15 to remove analytes per client request.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Chris Derouen for
Taylor Ezell
taylor.ezell@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Axeon ES137043
Pace Project No.: 92275382

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Axeon ES137043
Pace Project No.: 92275382

Sample: TW 11 **Lab ID: 92275382001** Collected: 11/06/15 11:30 Received: 11/10/15 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SPLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1312; 11/11/15 15:18							
2-Butanone (MEK)	ND	ug/L	5.0	1		11/14/15 11:01	78-93-3	
Surrogates								
1,2-Dichloroethane-d4 (S)	100	%		1		11/14/15 11:01	17060-07-0	
Toluene-d8 (S)	111	%		1		11/14/15 11:01	2037-26-5	
4-Bromofluorobenzene (S)	101	%		1		11/14/15 11:01	460-00-4	

Sample: TW 5 **Lab ID: 92275382002** Collected: 11/06/15 14:40 Received: 11/10/15 09:30 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV SPLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1312; 11/11/15 15:18							
2-Butanone (MEK)	ND	ug/L	5.0	1		11/14/15 11:18	78-93-3	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%		1		11/14/15 11:18	17060-07-0	
Toluene-d8 (S)	107	%		1		11/14/15 11:18	2037-26-5	
4-Bromofluorobenzene (S)	107	%		1		11/14/15 11:18	460-00-4	

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Axeon ES137043
Pace Project No.: 92275382

QC Batch: MSV/34287 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SPLP
Associated Lab Samples: 92275382001, 92275382002

METHOD BLANK: 1606975 Matrix: Water
Associated Lab Samples: 92275382001, 92275382002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2-Butanone (MEK)	ug/L	ND	5.0	11/14/15 10:27	
1,2-Dichloroethane-d4 (S)	%	99	70-130	11/14/15 10:27	
4-Bromofluorobenzene (S)	%	107	70-130	11/14/15 10:27	
Toluene-d8 (S)	%	108	70-130	11/14/15 10:27	

LABORATORY CONTROL SAMPLE: 1606976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Butanone (MEK)	ug/L	100	110	110	70-145	
1,2-Dichloroethane-d4 (S)	%			112	70-130	
4-Bromofluorobenzene (S)	%			108	70-130	
Toluene-d8 (S)	%			97	70-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Axeon ES137043
Pace Project No.: 92275382

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Axeon ES137043
Pace Project No.: 92275382

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92275382001	**TW 11**	EPA 3010	MPRP/20035	EPA 6010	ICP/18066
92275382002	**TW 5**	EPA 3010	MPRP/20035	EPA 6010	ICP/18066
92275382001	**TW 11**	EPA 8260	MSV/34287		
92275382002	**TW 5**	EPA 8260	MSV/34287		

Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: May 16, 2013 Page 1 of 2*
	Document Number: F-CHR-CS-003-rev.16	Issuing Authority: Pace Huntersville Quality Office

Client Name: Terracon

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun T1402 Type of Ice: (Wet) Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor T1402 No Correction

Corrected Cooler Temp.: 3.2 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 11-10-15 KLD

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☐No ☑N/A	6.
Rush Turn Around Time Requested:	☐Yes ☐No ☑N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☐Yes ☑No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review: KF Date: 11/10/15

SRF Review: (KF) Date: 11/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO# : 92275382

92275382

Serial Number: 75108

Avery Laboratories & Environmental Services, LLC

Ship To: 2720 Gregory St. , Unit 200 Savannah, Ga. 31404
T 912 944-3748 F 912 234-9294
email: pgrimm@averylab.com 7617-8

15110901
LAB NUMBER

Client Information	
Customer:	Terracon
Address:	3201 Rowland Ave.
City/State/Zip:	Savannah GA 31410
Contact:	Luke Braggs
Phone:	912 629 4000
Email:	Luke.Braggs@Terracon.com
Purchase Order #:	ES157093
Project Manager:	L.B.

Page ____ of ____
Sampler: SCY

Turn Around Time (Place X below)

24 Hours	
48 Hours	
72 Hours	
5 Working Days	
7 Working Days	
Other:	✓

Project Name: Axcon
Project Number: ES157093 State where work originated: GA

Subcontract Laboratory
Name / Address/ Phone

N
A
P

Sample Identification	Date	Time	Matrix	# of Containers	SPLP Metals	SPLP VOA	SPLP SVOA	Preservative	Remarks
					1	1	1		93875387
TW #11	11/6/15	1130	S	2	X	X	X		001
TW 5	11/6/15	1440	S	2	X	X	X		002

Matrix Type: A = Air W = Water S= Solid N = Nonaqueous (solvent, acid,

Preservative: 1= None 2 = H2SO4 3 = HN03 4 = HCL 5 = MeOH 6 = NAHSO4 7 = Water
8 = Sodium Bisulfate 9 = Other

Instructions or Special Requirements:

Temperature: 3.2 2.1°C

Custody Seals: Yes No

Custody Seals Intact: Yes No

Relinquished by:	Date/Time: 11/6/15 1601	Received by:	Date/Time: 11/6/15 1601
Relinquished by:	Date/Time: 11-9-15 9:30	Received by: Kroger - Pace - HVL	Date/Time: 11-10-15 9:30
Relinquished by:	Date/Time:	Received by:	Date/Time:

APPENDIX D

SOIL BORING LOGS/WELL CONSTRUCTION DETAILS

Terracon — Soil Boring Log / Well Construction Details

Project: Axeon Specialty Products		Project Number: ES157077	Boring/Well: **AW-62**
		Well Construction Data	
Date Started: 11/3/15	Latitude: 32.110522	Screen: 0.010" Slotted PVC	From: 5 To: 20
Logged By: RLB	Longitude: -81.124792	Pack: 20/30 Clean Filter Sand	From: 3 To: 20.5
Drilling Co.: GeoLab	Driller: Robert Taylor	Seal: Hydrated Bentonite Chips	From: 1 To: 3
Method: HSA	Equipment: CME 55	Grout: Neat Portland Cement	From: 0 To: 1
Boring Depth (ft.): 20.5	Saturated Zone: 6.00 Date: 11/3/2015	Inner Casing: 4" Threaded PVC	
Boring Diameter (in): 8.25	Static Water Level: Date:	Notes:	

Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Well Detail	Depth
0					Topsoil, dark brown		0
2					**SAND** with **CLAY** **(SP-SC)**, light brown/grey, fine grained		2
4							4
6					**SAND** **(SP)**, brown, fine grained, with odor and sheen		6
					As above, saturated		
8							8
10							10
12							12
14					**CLAYEY SAND** **(SC)**, brown/grey, saturated		14
16							16
18							18
20							20
					Borehole terminated at 20.5 feet.		

LOG OF BORING WELL AXEON BORING LOGS.GPJ GAGE_GRP.GDT 12/4/15

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000, Fax: 912-629-4001

Terracon — Soil Boring Log / Well Construction Details

Project: Axeon Specialty Products		Project Number: ES157077	Boring/Well: POD-1
		Well Construction Data	
Date Started: 11/3/15	Latitude: 32.110534	Screen: 0.010" Slotted PVC	From: 5 To: 20
Logged By: RLB	Longitude: -81.124775	Pack: 20/30 Clean Filter Sand	From: 3 To: 20.5
Drilling Co.: GeoLab	Driller: Robert Taylor	Seal: Hydrated Bentonite Chips	From: 1 To: 3
Method: HSA	Equipment: CME 55	Grout: Neat Portland Cement	From: 0 To: 1
Boring Depth (ft.): 20.5	Saturated Zone: ▽ 6.00 Date: 11/3/2015	Inner Casing: 2" Threaded PVC	
Boring Diameter (in): 8.25	Static Water Level: ▼ Date:	Notes:	

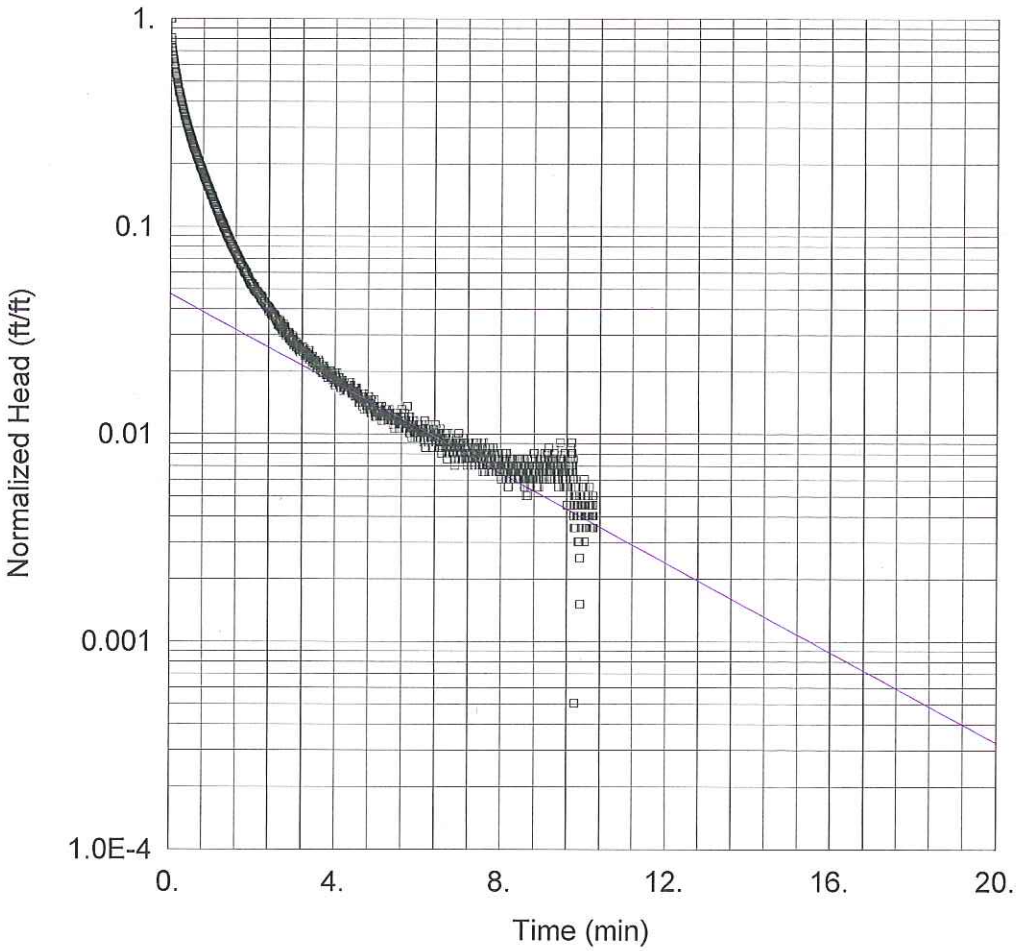
Depth	Sample	Sample Number	PID (ppm)	Lithology	Description	Well Detail	Depth
0					Topsoil, dark brown		
2					**SAND** with **CLAY** **(SP-SC)**, light brown/grey, fine grained		2
4							4
6					**SAND** **(SP)**, brown, fine grained, with odor and sheen, saturated	▽	6
8							8
10							10
12							12
14					**CLAYEY SAND** **(SC)**, brown/grey, saturated		14
16							16
18							18
20					Borehole terminated at 20.5 feet.		20

LOG OF BORING WELL AXEON BORING LOGS.GPJ GAGE_GRP.GDT 12/4/15

Terracon
2201 Rowland Avenue, Savannah, Georgia 31404
Phone: 912-629-4000, Fax: 912-629-4001

APPENDIX E

SLUG TEST DATA



WELL TEST ANALYSIS

Data Set: O:\ES157077 Axeon VRP Application\Slug Test Data\AW-25-1.aqt
Date: 11/05/15 Time: 12:38:11

PROJECT INFORMATION

Company: Terracon Consultants, Inc.
Client: Axeon Savannah Terminal
Project: ES157077
Location: Savannah, Georgia
Test Well: AW-25-1
Test Date: 3 November 2015

AQUIFER DATA

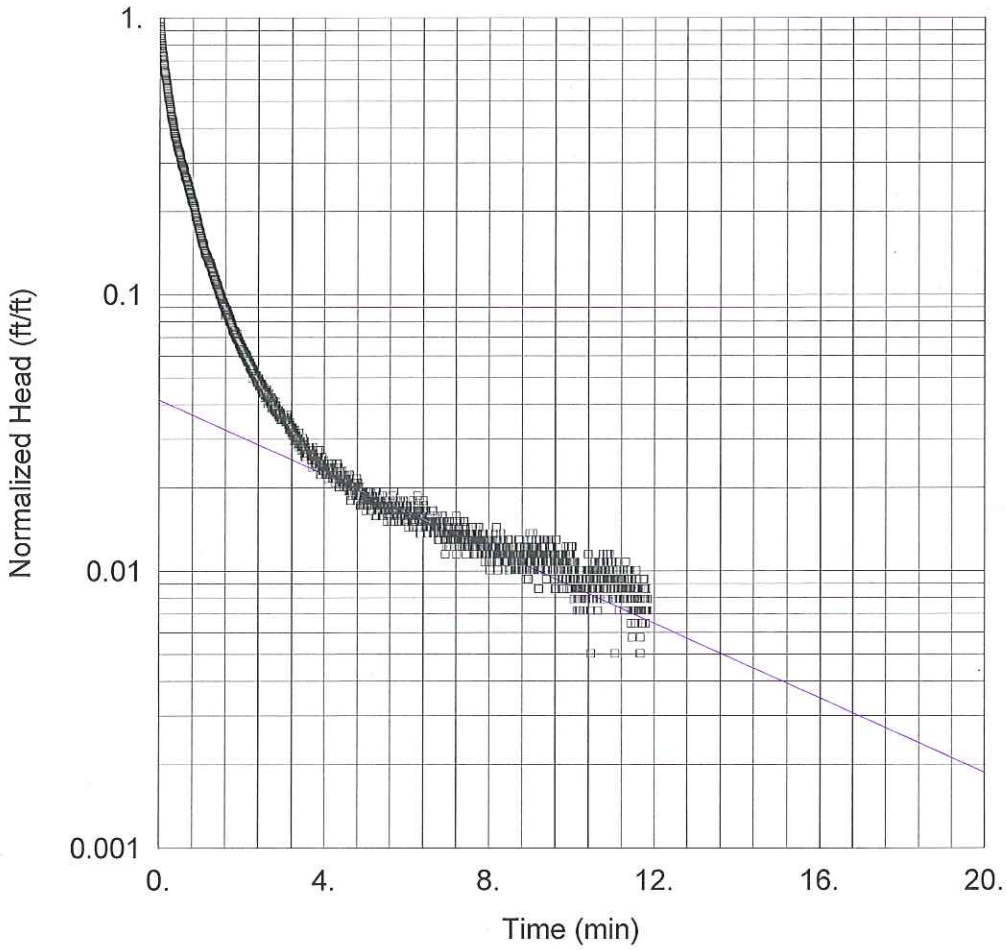
Saturated Thickness: 9.55 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AW-25)

Initial Displacement: 1.983 ft
Total Well Penetration Depth: 9.55 ft
Casing Radius: 0.083 ft
Static Water Column Height: 9.55 ft
Screen Length: 9.55 ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0001669 cm/sec
y0 = 0.09434 ft



WELL TEST ANALYSIS

Data Set: O:\ES157077 Axeon VRP Application\Slug Test Data\AW-25-2.aqt
Date: 11/05/15 Time: 12:43:50

PROJECT INFORMATION

Company: Terracon Consultants, Inc.
Client: Axeon Savannah Terminal
Project: ES157077
Location: Savannah, Georgia
Test Well: AW-25-2
Test Date: 3 November 2015

AQUIFER DATA

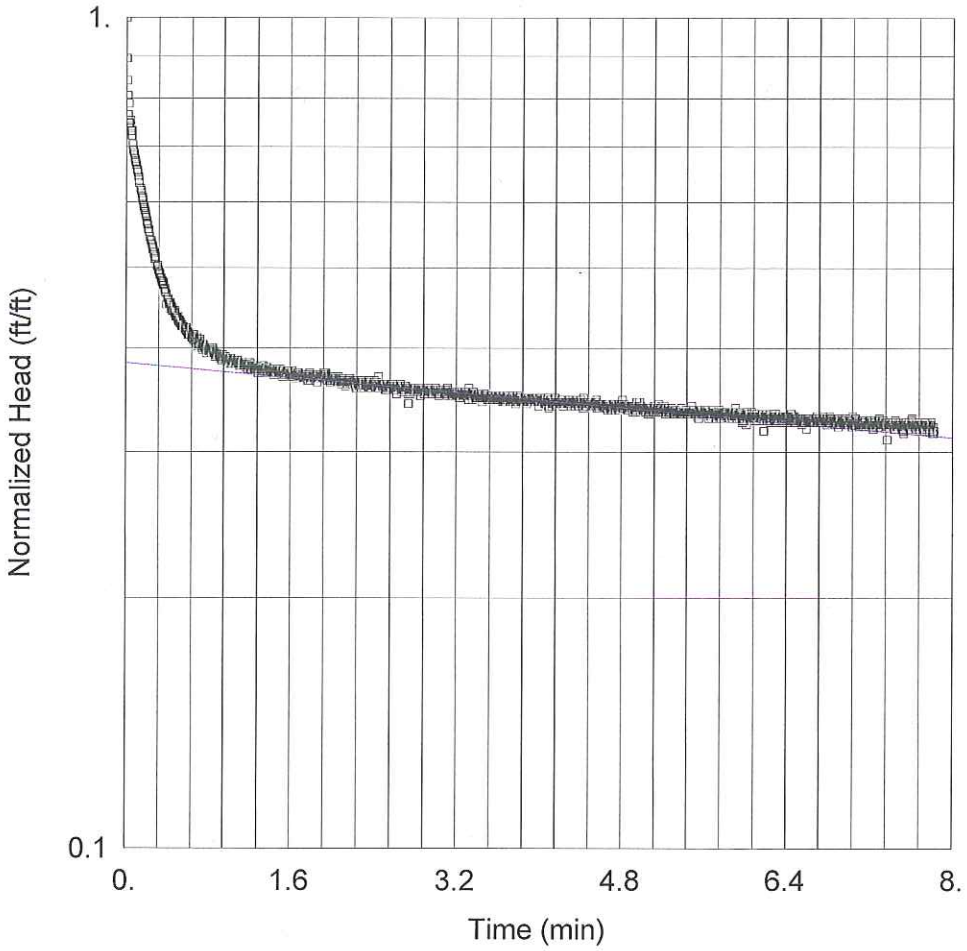
Saturated Thickness: 9.55 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AW-25)

Initial Displacement: 1.39 ft
Total Well Penetration Depth: 9.55 ft
Casing Radius: 0.083 ft
Static Water Column Height: 9.55 ft
Screen Length: 9.55 ft
Well Radius: 0.083 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.0001039 cm/sec
y0 = 0.05778 ft



WELL TEST ANALYSIS

Data Set: O:\ES157077 Axeon VRP Application\Slug Test Data\AW-71-1.aqt
Date: 11/05/15 Time: 11:58:14

PROJECT INFORMATION

Company: Terracon Consultants, Inc.
Client: Axeon Savannah Terminal
Project: ES157077
Location: Savannah, Georgia
Test Well: AW-71-1
Test Date: 3 November 2015

AQUIFER DATA

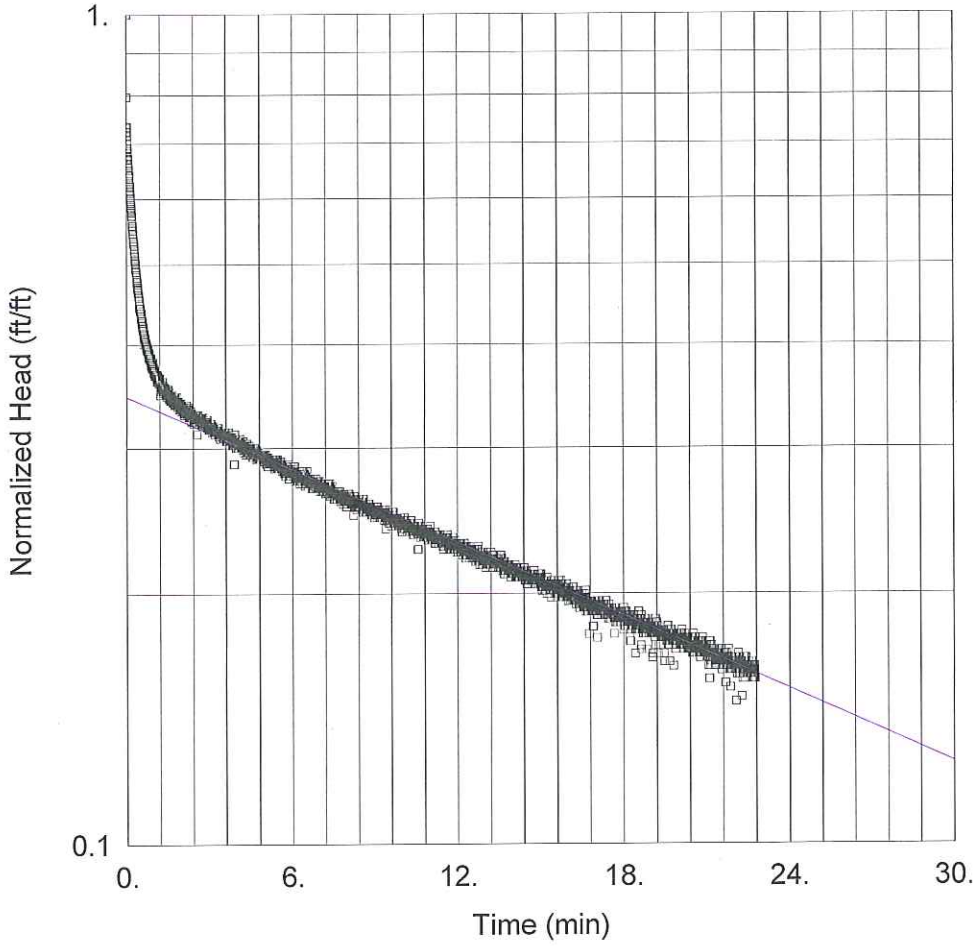
Saturated Thickness: 9.28 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AW-71)

Initial Displacement: 0.525 ft
Total Well Penetration Depth: 9.28 ft
Casing Radius: 0.167 ft
Static Water Column Height: 9.28 ft
Screen Length: 9.28 ft
Well Radius: 0.167 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 6.098E-5 cm/sec
y0 = 0.2017 ft



WELL TEST ANALYSIS

Data Set: O:\ES157077 Axeon VRP Application\Slug Test Data\AW-71-2.aqt
Date: 11/05/15 Time: 12:11:18

PROJECT INFORMATION

Company: Terracon Consultants, Inc.
Client: Axeon Savannah Terminal
Project: ES157077
Location: Savannah, Georgia
Test Well: AW-71-2
Test Date: 3 November 2015

AQUIFER DATA

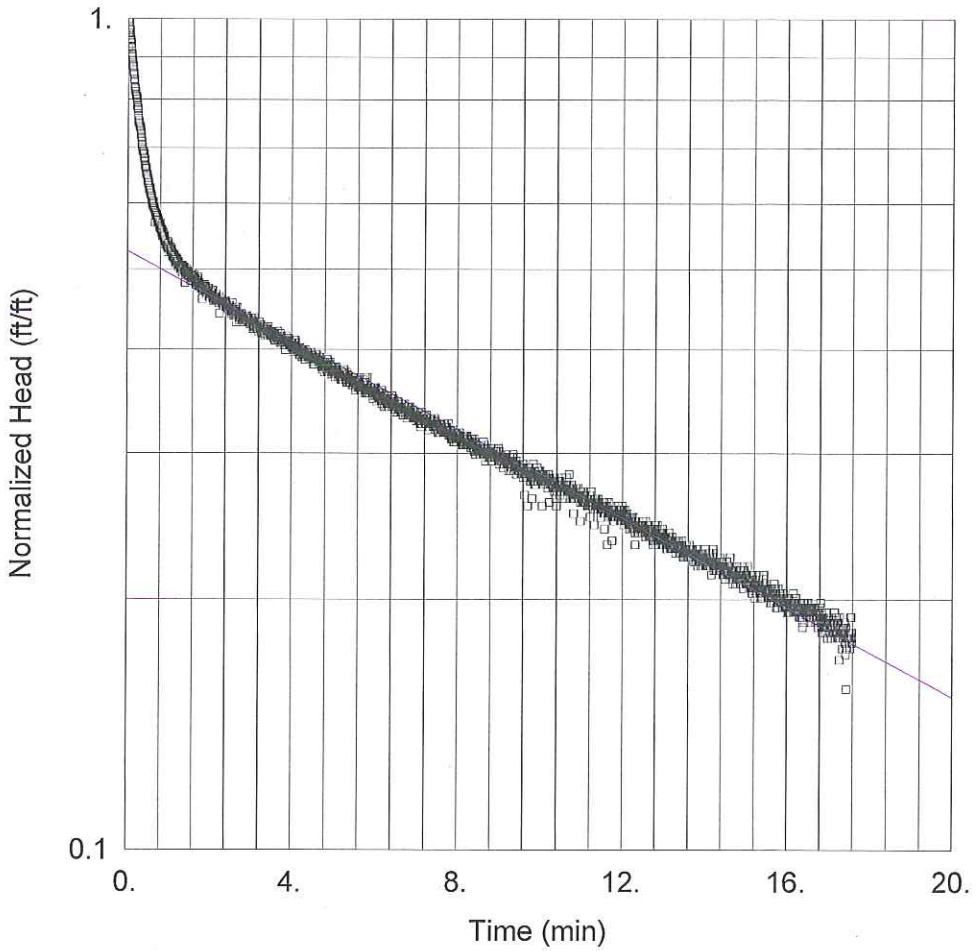
Saturated Thickness: 9.27 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AW-71)

Initial Displacement: 0.526 ft
Total Well Penetration Depth: 9.27 ft
Casing Radius: 0.167 ft
Static Water Column Height: 9.27 ft
Screen Length: 9.27 ft
Well Radius: 0.167 ft
Gravel Pack Porosity: 0.3

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 7.952E-5 cm/sec
y0 = 0.1821 ft



WELL TEST ANALYSIS

Data Set: O:\ES157077 Axeon VRP Application\Slug Test Data\AW-71-3.aqt
Date: 11/05/15 Time: 12:23:43

PROJECT INFORMATION

Company: Terracon Consultants, Inc.
Client: Axeon Savannah Terminal
Project: ES157077
Location: Savannah, Georgia
Test Well: AW-71-3
Test Date: 3 November 2015

AQUIFER DATA

Saturated Thickness: 9.07 ft
Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (AW-71)

Initial Displacement: 0.378 ft
Total Well Penetration Depth: 9.07 ft
Casing Radius: 0.167 ft
Static Water Column Height: 9.07 ft
Screen Length: 9.07 ft
Well Radius: 0.167 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 0.000148 cm/sec
y0 = 0.1989 ft

APPENDIX F

TYPE 3 RISK REDUCTION STANDARD EVALUATION

Axeon Savannah Terminal

7 Foundation Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES157077

Table 1: Chemical Specific Values

Analyte	CAS No.	Carcinogen Category	Chronic Reference Dose		Cancer Slope Factor		RfC_I	IUR	D_i	H	K_{oc}	K_d	C_{sat}
			Inhalation RfD_I (mg/kg-day)	Oral RfD_o (mg/kg-day)	Inhalation SFo $(mg/kg\text{-}day)^{-1}$	Oral SFi $(mg/kg\text{-}day)^{-1}$	(mg/m^3)	$(\mu g/m^3)^{-1}$	(cm^2/s)	$(atm\text{-}m^3/mol)$	(cm^3/g)	(cm^3/g)	(mg/kg)
Benzene	71-43-2	A	8.57E-03	4.00E-03	5.50E-02	2.73E-02	3.00E-02	7.80E-06	9.00E-02	5.60E-03	1.50E+02	3.00E-01	1.80E+03
Naphthalene	91-20-3	C	8.57E-04	2.00E-02	---	1.19E-01	3.00E-03	3.40E-05	6.00E-02	4.40E-04	1.50E+03	3.00E+00	--
MEK	78-93-3	---	1.43E+00	6.00E-01	---	---	5.00E+00	0.00E+00	9.10E-02	5.70E-05	4.50E+00	9.00E-03	2.80E+04
Arsenic	7440-38-2	A	4.29E-06	3.00E-04	---	---	1.50E-05	4.30E-03	---	---	---	2.90E+01	---

Notes:
--- = Value Not Available

References:
US EPA Regional Screening Level (RSL) Chemical-Specific Parameters Supporting Table June 2015
US EPA Regional Screening Level (RSL) Industrial Soil Table June 2015
US EPA Integrated Risk Information System (IRIS)
US EPA Risk Assessment Guidance for Superfund (RAGS) Part B, Chapter 3
Georgia EPD Hazardous Site Reponse Act (HSRA) Guidance, Appendix I-III

Axeon Savannah Terminal

7 Foundation Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES157077

Table 2: Soil-to-Air Volatilization Factor Calculation

Analyte	D_{ei} (cm^2/s)	K_{as} (g soil/cm^3 air)	α (cm^2/s)	VF (m^3/kg)
Benzene	6.365E-02	7.653E-01	8.566E-03	1.35E+03
Naphthalene	4.243E-02	6.013E-03	5.178E-05	2.00E+04
MEK	6.436E-02	2.597E-01	3.225E-03	2.41E+03
Arsenic	---	---	---	---

Notes:
--- = Value Not Available
Parameters and Standard Assumptions from Georgia EPD HSRA Guidance, Appendix III, Table 3

References:
US EPA Regional Screening Level (RSL) Chemical-Specific Parameters Supporting Table June 2015
US EPA Regional Screening Level (RSL) Industrial Soil Table June 2015
US EPA Integrated Risk Information System (IRIS)
US EPA Risk Assessment Guidance for Superfund (RAGS) Part B, Chapter 3
Georgia EPD Hazardous Site Reponse Act (HSRA) Guidance, Appendix I-III

Axeon Savannah Terminal

7 Foundation Drive
Savannah, Chatham County, Georgia
Terracon Project No. ES157077

Type 3 Risk Reduction Standard Evaluation

Analyte	Groundwater
	Georgia HSRA Appendix III Notification Concentrations (mg/L)
Benzene	**0.005**
Naphthalene	**0.02**
Arsenic	**0.010**

Analyte	Subsurface Soil		Surface Soil	
	Georgia EPD Appendix I Notification Criteria (mg/kg)	***Georgia EPD Appendix III Notification Criteria*** (conc x 100)	***Carcinogenic Effects*** $TR = 10^{-5}$ (mg/kg)	***Noncarcinogenic Effects*** THI = 1 (mg/kg)
MEK	1	**200**	---	17359.21

Notes:
--- = Unable to Calculate/Value Unavailable
Bold = Applicable Type 3 Risk Reduction Standard

References:
US EPA Regional Screening Level (RSL) Chemical-Specific Parameters Supporting Table June 2015
US EPA Regional Screening Level (RSL) Industrial Soil Table June 2015
US EPA Integrated Risk Information System (IRIS)
US EPA Risk Assessment Guidance for Superfund (RAGS) Part B, Chapter 3
US EPA Suppplemental Guidance for Developing Soil Screening Levels for Superfund Sites
Georgia EPD Hazardous Site Reponse Act (HSRA) Guidance, Appendix I-III

Appendix B
Field Sample Key and Analytical Laboratory Report

GHD Field Sample Key (FSK)

Site 89400

Sample Reason

Sampler Name Steve Grace / Zach Al-Marhoun

Sampling Company GHD Services Inc

Laboratory(s) Analytical Environmental Services

SSOW Reference Code :

Sample ID	Location	Sample Date (mm/dd/yyyy)	Sample Time (hh:mm)	Sample Type	Sample Matrix	Grab or Composite	Start Depth (ft bgs)	End Depth (ft bgs)	Parent Sample ID for Field Dups	Footnote(s)
089400-050416-SAG-001	(32.106458, -81.128546)	5/4/2016	850	N	SO	grab	2	2		
089400-050416-SAG-002	(32.107504, -81.127066)	5/4/2016	910	N	SO	grab	2	2		
089400-050416-SAG-003	(32.108565, -81.125684)	5/4/2016	940	N	SO	grab	2	2		
089400-050416-SAG-004	(32.109154, -81.124899)	5/4/2016	955	N	SO	grab	2	2		
089400-050416-SAG-005	Well Water House Pump	5/4/2016	1055	N	WG	grab				

Footnotes

1. e.g. "Sample on Hold "
2. e.g. "Composite Description"
3. e.g. "Sampling Method"
4.
5.
6.

Key

- Required Field
- Populate When Appropriate
- Field Data

GHD Field Sample Key (FSK)

Site 89400

Sample Reason

Sampler Name Steve Grace / Zach Al-Marhoun

Sampling Company GHD Services Inc

Laboratory(s) Analytical Environmental Services

SSOW Reference Code :

					pH	Temperature			Conductivity		Turbidity		DO		Eh / ORP	
Sample ID	Location	Sample Date (mm/dd/yyyy)	Sample Time (hh:mm)	Volume of Water Purged	Field pH	Sample Temp.	Ambient Temp.	Temp Units	Conductivity	Conductivity Units	Turbidity	Turbidity Units	DO	DO Units	Eh/ORP	Eh/ORP Units
089400-050416-SAG-001	(32.106458, -81.128546)	5/4/2016	850													
089400-050416-SAG-002	(32.107504, -81.127066)	5/4/2016	910													
089400-050416-SAG-003	(32.108565, -81.125684)	5/4/2016	940													
089400-050416-SAG-004	(32.109154, -81.124899)	5/4/2016	955													
089400-050416-SAG-005	Well Water House Pump	5/4/2016	1055													

Footnotes

1. e.g. "Sample on Hold "
2. e.g. "Composite Description"
3. e.g. "Sampling Method"
4.
5.
6.

Key

- Required Field
- Populate When Appropriate
- Field Data

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

May 17, 2016

Debbie Brennan
GHD Services, Inc.
9033 Meridian Way
West Chester OH 45069

TEL: (513) 942-4750
FAX:

RE: Epic - Savannah North Terminal

Dear Debbie Brennan: Order No: 1605383

Analytical Environmental Services, Inc. received 6 samples on 5/5/2016 8:28:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAC/Florida State Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, and Drinking Water Microbiology, effective 07/01/15-06/30/16.
-NELAC/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/15-06/30/16.
-NELAC/Texas Certificate No. T104704509-16-6 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 03/01/16-02/28/17.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

CRKanhai

Chantelle Kanhai
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704
TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1605383

Date: 5/5/2016 Page 1 of 1

COMPANY:	ADDRESS:
GHD SERVICES INC.	3075 BRECKINRIDGE BLVD. SUITE 470, DULUTH, GEORGIA 30096
PHONE: 770-441-0027	FAX:
SAMPLED BY: SAG	SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	VOC	SVOC	TOTAL METALS	VOC	VOC	TOTAL METALS	REMARKS	No # of Containers
	PRESERVATION (See codes)						S/M	NA	NA	NA	H	N		
1	089400-050416-SAG-001	5/4/16	0850	X		SO	3	1	1	1			*SEE	6
2	089400-050416-SAG-002	5/4/16	0910	X		SO	3	1	1	1			SOW	6
3	089400-050416-SAG-003	5/4/16	0940	X		SO	3	1	1	1				6
4	089400-050416-SAG-004	5/4/16	0955	X		SO	3	1	1	1				6
5	089400-050416-SAG-005	5/4/16	1055	X		GW		2			2	1		3
6														
7														
8														
9														
10														
11														
12														
13														
14														

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	5/5/16	Temperature	5/5/16 8:28
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER

PROJECT INFORMATION

PROJECT NAME: EPIC TERMINALS SAVANNAH NORTH
PROJECT #: 089400
SITE ADDRESS: 7 FOUNDATION DRIVE SAVANNAH, GEORGIA 31408
SEND REPORT TO: JOHN.DIZINNO@GHD.COM
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT

Total # of Containers

Turnaround Time Request
- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same Day Rush (auth req.)
- [ ] Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 17-May-16

Client: GHD Services, Inc.
Project: Epic - Savannah North Terminal
Lab ID: 1605383

Case Narrative

Sample Receiving Nonconformance:

A Trip Blank was provided but not listed on the Chain of Custody. Trip blank analyzed at no cost to the client.

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-001
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 8:50:00 AM
Lab ID:	1605383-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TOTAL MERCURY SW7471B				**(SW7471B)**				
Mercury	BRL	0.113		mg/Kg-dry	223760	1	05/10/2016 13:26	JR
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
1,1´-Biphenyl	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4,5-Trichlorophenol	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4,6-Trichlorophenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4-Dichlorophenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4-Dimethylphenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4-Dinitrophenol	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,4-Dinitrotoluene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2,6-Dinitrotoluene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Chloronaphthalene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Chlorophenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Methylnaphthalene	1500	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Methylphenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Nitroaniline	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
2-Nitrophenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
3,3´-Dichlorobenzidine	BRL	1200		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
3-Nitroaniline	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4,6-Dinitro-2-methylphenol	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Bromophenyl phenyl ether	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Chloro-3-methylphenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Chloroaniline	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Chlorophenyl phenyl ether	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Methylphenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Nitroaniline	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
4-Nitrophenol	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Acenaphthene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Acenaphthylene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Acetophenone	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Anthracene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Atrazine	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benz(a)anthracene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benzaldehyde	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benzo(a)pyrene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benzo(b)fluoranthene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benzo(g,h,i)perylene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Benzo(k)fluoranthene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Bis(2-chloroethoxy)methane	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Bis(2-chloroethyl)ether	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Bis(2-chloroisopropyl)ether	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-001
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 8:50:00 AM
Lab ID:	1605383-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
Bis(2-ethylhexyl)phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Butyl benzyl phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Caprolactam	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Carbazole	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Chrysene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Di-n-butyl phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Di-n-octyl phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Dibenz(a,h)anthracene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Dibenzofuran	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Diethyl phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Dimethyl phthalate	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Fluoranthene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Fluorene	1100	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Hexachlorobenzene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Hexachlorobutadiene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Hexachlorocyclopentadiene	BRL	1200		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Hexachloroethane	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Indeno(1,2,3-cd)pyrene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Isophorone	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
N-Nitrosodi-n-propylamine	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
N-Nitrosodiphenylamine	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Naphthalene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Nitrobenzene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Pentachlorophenol	BRL	3000		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Phenanthrene	3100	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Phenol	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Pyrene	BRL	590		ug/Kg-dry	223676	1	05/06/2016 19:52	YH
Surr: 2,4,6-Tribromophenol	74.7	42.4-130		%REC	223676	1	05/06/2016 19:52	YH
Surr: 2-Fluorobiphenyl	72.5	51.5-120		%REC	223676	1	05/06/2016 19:52	YH
Surr: 2-Fluorophenol	61	41.1-120		%REC	223676	1	05/06/2016 19:52	YH
Surr: 4-Terphenyl-d14	67.6	52.7-117		%REC	223676	1	05/06/2016 19:52	YH
Surr: Nitrobenzene-d5	76.1	41.4-120		%REC	223676	1	05/06/2016 19:52	YH
Surr: Phenol-d5	63	47.6-120		%REC	223676	1	05/06/2016 19:52	YH
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,1,1-Trichloroethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,1,2,2-Tetrachloroethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,1,2-Trichloroethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,1-Dichloroethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,1-Dichloroethene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,2,4-Trichlorobenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-001
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 8:50:00 AM
Lab ID:	1605383-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromo-3-chloropropane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,2-Dibromoethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,2-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,2-Dichloroethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,2-Dichloropropane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,3-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
1,4-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
2-Butanone	BRL	35		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
2-Hexanone	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
4-Methyl-2-pentanone	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Acetone	170	70		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Benzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Bromodichloromethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Bromoform	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Bromomethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Carbon disulfide	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Carbon tetrachloride	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Chlorobenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Chloroethane	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Chloroform	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Chloromethane	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
cis-1,2-Dichloroethene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
cis-1,3-Dichloropropene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Cyclohexane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Dibromochloromethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Dichlorodifluoromethane	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Ethylbenzene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Freon-113	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Isopropylbenzene	120	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
m,p-Xylene	3.6	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Methyl acetate	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Methyl tert-butyl ether	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Methylcyclohexane	520	350		ug/Kg-dry	223780	100	05/10/2016 23:19	NP
Methylene chloride	BRL	14		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
o-Xylene	16	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Styrene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Tetrachloroethene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Toluene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
trans-1,2-Dichloroethene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
trans-1,3-Dichloropropene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Trichloroethene	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG

Qualifiers:

- * Value exceeds maximum contaminant level
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- N Analyte not NELAC certified
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- Narr See case narrative
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Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-001
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 8:50:00 AM
Lab ID:	1605383-001	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
Trichlorofluoromethane	BRL	3.5		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Vinyl chloride	BRL	7.0		ug/Kg-dry	223780	1	05/11/2016 15:30	CG
Surr: 4-Bromofluorobenzene	33.8	70-128	S	%REC	223780	1	05/11/2016 15:30	CG
Surr: 4-Bromofluorobenzene	93.1	70-128		%REC	223780	100	05/10/2016 23:19	NP
Surr: Dibromofluoromethane	113	78.2-128		%REC	223780	100	05/10/2016 23:19	NP
Surr: Dibromofluoromethane	124	78.2-128		%REC	223780	1	05/11/2016 15:30	CG
Surr: Toluene-d8	79.6	76.5-116		%REC	223780	1	05/11/2016 15:30	CG
Surr: Toluene-d8	108	76.5-116		%REC	223780	100	05/10/2016 23:19	NP
METALS, TOTAL SW6010D				**(SW3050B)**				
Arsenic	BRL	5.83		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Barium	28.1	5.83		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Cadmium	BRL	2.91		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Chromium	11.6	2.91		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Lead	6.09	5.83		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Selenium	BRL	5.83		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
Silver	BRL	2.91		mg/Kg-dry	223843	1	05/12/2016 12:47	IO
PERCENT MOISTURE D2216								
Percent Moisture	15.4	0		wt%	R316545	1	05/10/2016 14:00	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-002
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:10:00 AM
Lab ID:	1605383-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TOTAL MERCURY SW7471B				**(SW7471B)**				
Mercury	BRL	0.108		mg/Kg-dry	223760	1	05/10/2016 13:29	JR
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
1,1´-Biphenyl	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4,5-Trichlorophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4,6-Trichlorophenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4-Dichlorophenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4-Dimethylphenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4-Dinitrophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,4-Dinitrotoluene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2,6-Dinitrotoluene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Chloronaphthalene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Chlorophenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Methylnaphthalene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Methylphenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
2-Nitrophenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
3,3´-Dichlorobenzidine	BRL	800		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
3-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4,6-Dinitro-2-methylphenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Bromophenyl phenyl ether	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Chloro-3-methylphenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Chloroaniline	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Chlorophenyl phenyl ether	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Methylphenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
4-Nitrophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Acenaphthene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Acenaphthylene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Acetophenone	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Anthracene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Atrazine	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benz(a)anthracene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benzaldehyde	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benzo(a)pyrene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benzo(b)fluoranthene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benzo(g,h,i)perylene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Benzo(k)fluoranthene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Bis(2-chloroethoxy)methane	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Bis(2-chloroethyl)ether	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Bis(2-chloroisopropyl)ether	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-002
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:10:00 AM
Lab ID:	1605383-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
Bis(2-ethylhexyl)phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Butyl benzyl phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Caprolactam	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Carbazole	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Chrysene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Di-n-butyl phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Di-n-octyl phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Dibenz(a,h)anthracene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Dibenzofuran	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Diethyl phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Dimethyl phthalate	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Fluoranthene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Fluorene	1900	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Hexachlorobenzene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Hexachlorobutadiene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Hexachlorocyclopentadiene	BRL	790		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Hexachloroethane	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Indeno(1,2,3-cd)pyrene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Isophorone	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
N-Nitrosodi-n-propylamine	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
N-Nitrosodiphenylamine	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Naphthalene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Nitrobenzene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Pentachlorophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Phenanthrene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Phenol	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Pyrene	BRL	400		ug/Kg-dry	223676	1	05/06/2016 20:20	YH
Surr: 2,4,6-Tribromophenol	69.1	42.4-130		%REC	223676	1	05/06/2016 20:20	YH
Surr: 2-Fluorobiphenyl	78.8	51.5-120		%REC	223676	1	05/06/2016 20:20	YH
Surr: 2-Fluorophenol	64.6	41.1-120		%REC	223676	1	05/06/2016 20:20	YH
Surr: 4-Terphenyl-d14	62.4	52.7-117		%REC	223676	1	05/06/2016 20:20	YH
Surr: Nitrobenzene-d5	72.4	41.4-120		%REC	223676	1	05/06/2016 20:20	YH
Surr: Phenol-d5	70.2	47.6-120		%REC	223676	1	05/06/2016 20:20	YH
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,1,1-Trichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,1,2,2-Tetrachloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,1,2-Trichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,1-Dichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,1-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,2,4-Trichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-002
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:10:00 AM
Lab ID:	1605383-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromo-3-chloropropane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,2-Dibromoethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,2-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,2-Dichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,2-Dichloropropane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,3-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
1,4-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
2-Butanone	BRL	32		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
2-Hexanone	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
4-Methyl-2-pentanone	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Acetone	92	64		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Benzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Bromodichloromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Bromoform	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Bromomethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Carbon disulfide	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Carbon tetrachloride	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Chlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Chloroethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Chloroform	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Chloromethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
cis-1,2-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
cis-1,3-Dichloropropene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Cyclohexane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Dibromochloromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Dichlorodifluoromethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Ethylbenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Freon-113	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Isopropylbenzene	15	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
m,p-Xylene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Methyl acetate	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Methyl tert-butyl ether	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Methylcyclohexane	16	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Methylene chloride	BRL	13		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
o-Xylene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Styrene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Tetrachloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Toluene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
trans-1,2-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
trans-1,3-Dichloropropene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Trichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-002
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:10:00 AM
Lab ID:	1605383-002	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
Trichlorofluoromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Vinyl chloride	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 13:47	CG
Surr: 4-Bromofluorobenzene	79.3	70-128		%REC	223781	1	05/11/2016 13:47	CG
Surr: Dibromofluoromethane	117	78.2-128		%REC	223781	1	05/11/2016 13:47	CG
Surr: Toluene-d8	80.3	76.5-116		%REC	223781	1	05/11/2016 13:47	CG
METALS, TOTAL SW6010D				**(SW3050B)**				
Arsenic	BRL	5.90		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Barium	26.4	5.90		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Cadmium	BRL	2.95		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Chromium	13.0	2.95		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Lead	16.5	5.90		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Selenium	BRL	5.90		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
Silver	BRL	2.95		mg/Kg-dry	223843	1	05/12/2016 14:01	IO
PERCENT MOISTURE D2216								
Percent Moisture	16.7	0		wt%	R316545	1	05/10/2016 14:00	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-003
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:40:00 AM
Lab ID:	1605383-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TOTAL MERCURY SW7471B				**(SW7471B)**				
Mercury	BRL	0.107		mg/Kg-dry	223760	1	05/10/2016 13:31	JR
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
1,1´-Biphenyl	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4,5-Trichlorophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4,6-Trichlorophenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4-Dichlorophenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4-Dimethylphenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4-Dinitrophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,4-Dinitrotoluene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2,6-Dinitrotoluene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Chloronaphthalene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Chlorophenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Methylnaphthalene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Methylphenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
2-Nitrophenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
3,3´-Dichlorobenzidine	BRL	780		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
3-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4,6-Dinitro-2-methylphenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Bromophenyl phenyl ether	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Chloro-3-methylphenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Chloroaniline	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Chlorophenyl phenyl ether	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Methylphenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Nitroaniline	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
4-Nitrophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Acenaphthene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Acenaphthylene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Acetophenone	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Anthracene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Atrazine	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benz(a)anthracene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benzaldehyde	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benzo(a)pyrene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benzo(b)fluoranthene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benzo(g,h,i)perylene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Benzo(k)fluoranthene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Bis(2-chloroethoxy)methane	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Bis(2-chloroethyl)ether	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Bis(2-chloroisopropyl)ether	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-003
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:40:00 AM
Lab ID:	1605383-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
Bis(2-ethylhexyl)phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Butyl benzyl phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Caprolactam	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Carbazole	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Chrysene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Di-n-butyl phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Di-n-octyl phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Dibenz(a,h)anthracene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Dibenzofuran	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Diethyl phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Dimethyl phthalate	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Fluoranthene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Fluorene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Hexachlorobenzene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Hexachlorobutadiene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Hexachlorocyclopentadiene	BRL	770		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Hexachloroethane	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Indeno(1,2,3-cd)pyrene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Isophorone	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
N-Nitrosodi-n-propylamine	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
N-Nitrosodiphenylamine	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Naphthalene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Nitrobenzene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Pentachlorophenol	BRL	2000		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Phenanthrene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Phenol	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Pyrene	BRL	380		ug/Kg-dry	223676	1	05/06/2016 20:47	YH
Surr: 2,4,6-Tribromophenol	76.6	42.4-130		%REC	223676	1	05/06/2016 20:47	YH
Surr: 2-Fluorobiphenyl	69.6	51.5-120		%REC	223676	1	05/06/2016 20:47	YH
Surr: 2-Fluorophenol	60.7	41.1-120		%REC	223676	1	05/06/2016 20:47	YH
Surr: 4-Terphenyl-d14	57.4	52.7-117		%REC	223676	1	05/06/2016 20:47	YH
Surr: Nitrobenzene-d5	54.4	41.4-120		%REC	223676	1	05/06/2016 20:47	YH
Surr: Phenol-d5	60.6	47.6-120		%REC	223676	1	05/06/2016 20:47	YH
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,1,1-Trichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,1,2,2-Tetrachloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,1,2-Trichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,1-Dichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,1-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,2,4-Trichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-003
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:40:00 AM
Lab ID:	1605383-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromo-3-chloropropane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,2-Dibromoethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,2-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,2-Dichloroethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,2-Dichloropropane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,3-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
1,4-Dichlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
2-Butanone	BRL	32		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
2-Hexanone	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
4-Methyl-2-pentanone	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Acetone	BRL	64		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Benzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Bromodichloromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Bromoform	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Bromomethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Carbon disulfide	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Carbon tetrachloride	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Chlorobenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Chloroethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Chloroform	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Chloromethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
cis-1,2-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
cis-1,3-Dichloropropene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Cyclohexane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Dibromochloromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Dichlorodifluoromethane	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Ethylbenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Freon-113	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Isopropylbenzene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
m,p-Xylene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Methyl acetate	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Methyl tert-butyl ether	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Methylcyclohexane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Methylene chloride	BRL	13		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
o-Xylene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Styrene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Tetrachloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Toluene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
trans-1,2-Dichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
trans-1,3-Dichloropropene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Trichloroethene	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-003
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:40:00 AM
Lab ID:	1605383-003	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
Trichlorofluoromethane	BRL	3.2		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Vinyl chloride	BRL	6.4		ug/Kg-dry	223781	1	05/11/2016 12:29	CG
Surr: 4-Bromofluorobenzene	83.5	70-128		%REC	223781	1	05/11/2016 12:29	CG
Surr: Dibromofluoromethane	108	78.2-128		%REC	223781	1	05/11/2016 12:29	CG
Surr: Toluene-d8	98.4	76.5-116		%REC	223781	1	05/11/2016 12:29	CG
METALS, TOTAL SW6010D				**(SW3050B)**				
Arsenic	BRL	5.66		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Barium	17.4	5.66		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Cadmium	BRL	2.83		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Chromium	3.65	2.83		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Lead	6.23	5.66		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Selenium	BRL	5.66		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
Silver	BRL	2.83		mg/Kg-dry	223843	1	05/12/2016 14:12	IO
PERCENT MOISTURE D2216								
Percent Moisture	13.9	0		wt%	R316545	1	05/10/2016 14:00	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-004
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:55:00 AM
Lab ID:	1605383-004	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TOTAL MERCURY SW7471B				**(SW7471B)**				
Mercury	BRL	0.0955		mg/Kg-dry	223760	1	05/10/2016 13:33	JR
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
1,1´-Biphenyl	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4,5-Trichlorophenol	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4,6-Trichlorophenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4-Dichlorophenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4-Dimethylphenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4-Dinitrophenol	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,4-Dinitrotoluene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2,6-Dinitrotoluene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Chloronaphthalene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Chlorophenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Methylnaphthalene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Methylphenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Nitroaniline	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
2-Nitrophenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
3,3´-Dichlorobenzidine	BRL	740		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
3-Nitroaniline	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4,6-Dinitro-2-methylphenol	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Bromophenyl phenyl ether	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Chloro-3-methylphenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Chloroaniline	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Chlorophenyl phenyl ether	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Methylphenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Nitroaniline	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
4-Nitrophenol	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Acenaphthene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Acenaphthylene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Acetophenone	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Anthracene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Atrazine	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benz(a)anthracene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benzaldehyde	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benzo(a)pyrene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benzo(b)fluoranthene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benzo(g,h,i)perylene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Benzo(k)fluoranthene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Bis(2-chloroethoxy)methane	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Bis(2-chloroethyl)ether	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Bis(2-chloroisopropyl)ether	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-004
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:55:00 AM
Lab ID:	1605383-004	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3550C)**				
Bis(2-ethylhexyl)phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Butyl benzyl phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Caprolactam	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Carbazole	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Chrysene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Di-n-butyl phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Di-n-octyl phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Dibenz(a,h)anthracene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Dibenzofuran	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Diethyl phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Dimethyl phthalate	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Fluoranthene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Fluorene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Hexachlorobenzene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Hexachlorobutadiene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Hexachlorocyclopentadiene	BRL	730		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Hexachloroethane	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Indeno(1,2,3-cd)pyrene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Isophorone	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
N-Nitrosodi-n-propylamine	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
N-Nitrosodiphenylamine	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Naphthalene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Nitrobenzene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Pentachlorophenol	BRL	1900		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Phenanthrene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Phenol	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Pyrene	BRL	370		ug/Kg-dry	223676	1	05/06/2016 21:15	YH
Surr: 2,4,6-Tribromophenol	84.4	42.4-130		%REC	223676	1	05/06/2016 21:15	YH
Surr: 2-Fluorobiphenyl	69.8	51.5-120		%REC	223676	1	05/06/2016 21:15	YH
Surr: 2-Fluorophenol	60.4	41.1-120		%REC	223676	1	05/06/2016 21:15	YH
Surr: 4-Terphenyl-d14	62	52.7-117		%REC	223676	1	05/06/2016 21:15	YH
Surr: Nitrobenzene-d5	53.1	41.4-120		%REC	223676	1	05/06/2016 21:15	YH
Surr: Phenol-d5	63.2	47.6-120		%REC	223676	1	05/06/2016 21:15	YH
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,1,1-Trichloroethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,1,2,2-Tetrachloroethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,1,2-Trichloroethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,1-Dichloroethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,1-Dichloroethene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,2,4-Trichlorobenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-004
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:55:00 AM
Lab ID:	1605383-004	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
1,2-Dibromo-3-chloropropane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,2-Dibromoethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,2-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,2-Dichloroethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,2-Dichloropropane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,3-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
1,4-Dichlorobenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
2-Butanone	BRL	35		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
2-Hexanone	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
4-Methyl-2-pentanone	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Acetone	BRL	69		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Benzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Bromodichloromethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Bromoform	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Bromomethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Carbon disulfide	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Carbon tetrachloride	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Chlorobenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Chloroethane	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Chloroform	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Chloromethane	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
cis-1,2-Dichloroethene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
cis-1,3-Dichloropropene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Cyclohexane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Dibromochloromethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Dichlorodifluoromethane	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Ethylbenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Freon-113	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Isopropylbenzene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
m,p-Xylene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Methyl acetate	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Methyl tert-butyl ether	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Methylcyclohexane	5.1	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Methylene chloride	BRL	14		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
o-Xylene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Styrene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Tetrachloroethene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Toluene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
trans-1,2-Dichloroethene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
trans-1,3-Dichloropropene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Trichloroethene	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-004
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 9:55:00 AM
Lab ID:	1605383-004	**Matrix:**	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5035)**				
Trichlorofluoromethane	BRL	3.5		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Vinyl chloride	BRL	6.9		ug/Kg-dry	223781	1	05/11/2016 12:55	CG
Surr: 4-Bromofluorobenzene	90.8	70-128		%REC	223781	1	05/11/2016 12:55	CG
Surr: Dibromofluoromethane	108	78.2-128		%REC	223781	1	05/11/2016 12:55	CG
Surr: Toluene-d8	101	76.5-116		%REC	223781	1	05/11/2016 12:55	CG
METALS, TOTAL SW6010D				**(SW3050B)**				
Arsenic	BRL	5.47		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Barium	14.9	5.47		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Cadmium	BRL	2.74		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Chromium	BRL	2.74		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Lead	BRL	5.47		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Selenium	BRL	5.47		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
Silver	BRL	2.74		mg/Kg-dry	223843	1	05/12/2016 14:15	IO
PERCENT MOISTURE D2216								
Percent Moisture	9.61	0		wt%	R316545	1	05/10/2016 14:00	OM

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-005
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 10:55:00 AM
Lab ID:	1605383-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3510C)**				
1,1′-Biphenyl	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2,4,5-Trichlorophenol	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
2,4,6-Trichlorophenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2,4-Dichlorophenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2,4-Dimethylphenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2,4-Dinitrophenol	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
2,4-Dinitrotoluene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2,6-Dinitrotoluene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2-Chloronaphthalene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2-Chlorophenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2-Methylnaphthalene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2-Methylphenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
2-Nitroaniline	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
2-Nitrophenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
3,3′-Dichlorobenzidine	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
3-Nitroaniline	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
4,6-Dinitro-2-methylphenol	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
4-Bromophenyl phenyl ether	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
4-Chloro-3-methylphenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
4-Chloroaniline	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
4-Chlorophenyl phenyl ether	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
4-Methylphenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
4-Nitroaniline	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
4-Nitrophenol	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
Acenaphthene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Acenaphthylene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Acetophenone	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Anthracene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Atrazine	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benz(a)anthracene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benzaldehyde	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benzo(a)pyrene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benzo(b)fluoranthene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benzo(g,h,i)perylene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Benzo(k)fluoranthene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Bis(2-chloroethoxy)methane	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Bis(2-chloroethyl)ether	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Bis(2-chloroisopropyl)ether	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Bis(2-ethylhexyl)phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Butyl benzyl phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Caprolactam	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-005
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 10:55:00 AM
Lab ID:	1605383-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL-SEMIVOLATILE ORGANICS SW8270D				**(SW3510C)**				
Carbazole	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Chrysene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Di-n-butyl phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Di-n-octyl phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Dibenz(a,h)anthracene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Dibenzofuran	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Diethyl phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Dimethyl phthalate	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Fluoranthene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Fluorene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Hexachlorobenzene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Hexachlorobutadiene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Hexachlorocyclopentadiene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Hexachloroethane	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Indeno(1,2,3-cd)pyrene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Isophorone	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
N-Nitrosodi-n-propylamine	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
N-Nitrosodiphenylamine	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Naphthalene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Nitrobenzene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Pentachlorophenol	BRL	25		ug/L	223607	1	05/06/2016 15:24	YH
Phenanthrene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Phenol	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Pyrene	BRL	10		ug/L	223607	1	05/06/2016 15:24	YH
Surr: 2,4,6-Tribromophenol	84.1	51.5-141		%REC	223607	1	05/06/2016 15:24	YH
Surr: 2-Fluorobiphenyl	75.9	50.8-122		%REC	223607	1	05/06/2016 15:24	YH
Surr: 2-Fluorophenol	48.3	28.1-120		%REC	223607	1	05/06/2016 15:24	YH
Surr: 4-Terphenyl-d14	77.4	47.2-131		%REC	223607	1	05/06/2016 15:24	YH
Surr: Nitrobenzene-d5	53.7	42.1-124		%REC	223607	1	05/06/2016 15:24	YH
Surr: Phenol-d5	32.4	16-120		%REC	223607	1	05/06/2016 15:24	YH
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,1-Dichloroethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,1-Dichloroethene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,2-Dibromoethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-005
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 10:55:00 AM
Lab ID:	1605383-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,2-Dichloroethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,2-Dichloropropane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
2-Butanone	BRL	50		ug/L	223775	1	05/10/2016 12:09	NP
2-Hexanone	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
4-Methyl-2-pentanone	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
Acetone	BRL	50		ug/L	223775	1	05/10/2016 12:09	NP
Benzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Bromodichloromethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Bromoform	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Bromomethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Carbon disulfide	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Carbon tetrachloride	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Chlorobenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Chloroethane	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
Chloroform	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Chloromethane	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Cyclohexane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Dibromochloromethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Dichlorodifluoromethane	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
Ethylbenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Freon-113	BRL	10		ug/L	223775	1	05/10/2016 12:09	NP
Isopropylbenzene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
m,p-Xylene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Methyl acetate	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Methylcyclohexane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Methylene chloride	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
o-Xylene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Styrene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Tetrachloroethene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Toluene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Trichloroethene	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Trichlorofluoromethane	BRL	5.0		ug/L	223775	1	05/10/2016 12:09	NP
Vinyl chloride	BRL	2.0		ug/L	223775	1	05/10/2016 12:09	NP
Surr: 4-Bromofluorobenzene	98.8	70.7-125		%REC	223775	1	05/10/2016 12:09	NP

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	089400-050416-SAG-005
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/4/2016 10:55:00 AM
Lab ID:	1605383-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Surr: Dibromofluoromethane	102	82.2-120		%REC	223775	1	05/10/2016 12:09	NP
Surr: Toluene-d8	96.1	81.8-120		%REC	223775	1	05/10/2016 12:09	NP
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00020		mg/L	223638	1	05/06/2016 14:36	JR
METALS, TOTAL SW6010D				**(SW3010A)**				
Arsenic	BRL	0.0500		mg/L	223790	1	05/11/2016 19:57	IO
Barium	BRL	0.0200		mg/L	223790	1	05/11/2016 19:57	IO
Cadmium	BRL	0.0050		mg/L	223790	1	05/11/2016 19:57	IO
Chromium	BRL	0.0100		mg/L	223790	1	05/11/2016 19:57	IO
Lead	BRL	0.0100		mg/L	223790	1	05/11/2016 19:57	IO
Selenium	BRL	0.0200		mg/L	223790	1	05/11/2016 19:57	IO
Silver	BRL	0.0100		mg/L	223790	1	05/11/2016 19:57	IO

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/5/2016
Lab ID:	1605383-006	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,1-Dichloroethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,1-Dichloroethene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2-Dibromoethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2-Dichloroethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,2-Dichloropropane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
2-Butanone	BRL	50		ug/L	223775	1	05/09/2016 16:41	NP
2-Hexanone	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
4-Methyl-2-pentanone	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
Acetone	BRL	50		ug/L	223775	1	05/09/2016 16:41	NP
Benzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Bromodichloromethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Bromoform	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Bromomethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Carbon disulfide	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Carbon tetrachloride	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Chlorobenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Chloroethane	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
Chloroform	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Chloromethane	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Cyclohexane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Dibromochloromethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Dichlorodifluoromethane	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
Ethylbenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Freon-113	BRL	10		ug/L	223775	1	05/09/2016 16:41	NP
Isopropylbenzene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
m,p-Xylene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Methyl acetate	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Methylcyclohexane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Methylene chloride	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
o-Xylene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 17-May-16

Client:	GHD Services, Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Epic - Savannah North Terminal	**Collection Date:**	5/5/2016
Lab ID:	1605383-006	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Tetrachloroethene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Toluene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Trichloroethene	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Trichlorofluoromethane	BRL	5.0		ug/L	223775	1	05/09/2016 16:41	NP
Vinyl chloride	BRL	2.0		ug/L	223775	1	05/09/2016 16:41	NP
Surr: 4-Bromofluorobenzene	86.5	70.7-125		%REC	223775	1	05/09/2016 16:41	NP
Surr: Dibromofluoromethane	106	82.2-120		%REC	223775	1	05/09/2016 16:41	NP
Surr: Toluene-d8	102	81.8-120		%REC	223775	1	05/09/2016 16:41	NP

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client GHD Work Order Number 1605383

Checklist completed by _____ 5-5-16
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

Cooler #1 2.4 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by CJ

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223607

Sample ID: **MB-223607** Client ID: Units: **ug/L** Prep Date: **05/05/2016** Run No: **316279**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6810027**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1´-Biphenyl	BRL	10									
2,4,5-Trichlorophenol	BRL	25									
2,4,6-Trichlorophenol	BRL	10									
2,4-Dichlorophenol	BRL	10									
2,4-Dimethylphenol	BRL	10									
2,4-Dinitrophenol	BRL	25									
2,4-Dinitrotoluene	BRL	10									
2,6-Dinitrotoluene	BRL	10									
2-Chloronaphthalene	BRL	10									
2-Chlorophenol	BRL	10									
2-Methylnaphthalene	BRL	10									
2-Methylphenol	BRL	10									
2-Nitroaniline	BRL	25									
2-Nitrophenol	BRL	10									
3,3´-Dichlorobenzidine	BRL	10									
3-Nitroaniline	BRL	25									
4,6-Dinitro-2-methylphenol	BRL	25									
4-Bromophenyl phenyl ether	BRL	10									
4-Chloro-3-methylphenol	BRL	10									
4-Chloroaniline	BRL	10									
4-Chlorophenyl phenyl ether	BRL	10									
4-Methylphenol	BRL	10									
4-Nitroaniline	BRL	25									
4-Nitrophenol	BRL	25									
Acenaphthene	BRL	10									
Acenaphthylene	BRL	10									
Acetophenone	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223607

Sample ID: **MB-223607** Client ID: Units: **ug/L** Prep Date: **05/05/2016** Run No: **316279**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6810027**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Anthracene	BRL	10									
Atrazine	BRL	10									
Benz(a)anthracene	BRL	10									
Benzaldehyde	BRL	10									
Benzo(a)pyrene	BRL	10									
Benzo(b)fluoranthene	BRL	10									
Benzo(g,h,i)perylene	BRL	10									
Benzo(k)fluoranthene	BRL	10									
Bis(2-chloroethoxy)methane	BRL	10									
Bis(2-chloroethyl)ether	BRL	10									
Bis(2-chloroisopropyl)ether	BRL	10									
Bis(2-ethylhexyl)phthalate	BRL	10									
Butyl benzyl phthalate	BRL	10									
Caprolactam	BRL	10									
Carbazole	BRL	10									
Chrysene	BRL	10									
Di-n-butyl phthalate	BRL	10									
Di-n-octyl phthalate	BRL	10									
Dibenz(a,h)anthracene	BRL	10									
Dibenzofuran	BRL	10									
Diethyl phthalate	BRL	10									
Dimethyl phthalate	BRL	10									
Fluoranthene	BRL	10									
Fluorene	BRL	10									
Hexachlorobenzene	BRL	10									
Hexachlorobutadiene	BRL	10									
Hexachlorocyclopentadiene	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223607

Sample ID: **MB-223607** Client ID: Units: **ug/L** Prep Date: **05/05/2016** Run No: **316279**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6810027**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Hexachloroethane	BRL	10									
Indeno(1,2,3-cd)pyrene	BRL	10									
Isophorone	BRL	10									
N-Nitrosodi-n-propylamine	BRL	10									
N-Nitrosodiphenylamine	BRL	10									
Naphthalene	BRL	10									
Nitrobenzene	BRL	10									
Pentachlorophenol	BRL	25									
Phenanthrene	BRL	10									
Phenol	BRL	10									
Pyrene	BRL	10									
Surr: 2,4,6-Tribromophenol	108.6	0	100.0		109	51.5	141				
Surr: 2-Fluorobiphenyl	44.10	0	50.00		88.2	50.8	122				
Surr: 2-Fluorophenol	46.66	0	100.0		46.7	28.1	120				
Surr: 4-Terphenyl-d14	46.98	0	50.00		94.0	47.2	131				
Surr: Nitrobenzene-d5	34.08	0	50.00		68.2	42.1	124				
Surr: Phenol-d5	35.67	0	100.0		35.7	16	120				

Sample ID: **LCS-223607** Client ID: Units: **ug/L** Prep Date: **05/05/2016** Run No: **316279**
SampleType: **LCS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6810028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	93.59	10	100.0		93.6	71.3	129				
2-Chlorophenol	91.45	10	100.0		91.4	58.1	120				
4-Chloro-3-methylphenol	96.83	10	100.0		96.8	69.2	123				
4-Nitrophenol	57.32	25	100.0		57.3	20.2	120				
Acenaphthene	99.44	10	100.0		99.4	71.5	120				
N-Nitrosodi-n-propylamine	93.15	10	100.0		93.2	68.8	134				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223607

Sample ID: **LCS-223607** Client ID: Units: **ug/L** Prep Date: **05/05/2016** Run No: **316279**
SampleType: **LCS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6810028**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Pentachlorophenol	64.40	25	100.0		64.4	50.5	130				
Phenol	47.94	10	100.0		47.9	27	120				
Pyrene	101.0	10	100.0		101	71.1	133				
Surr: 2,4,6-Tribromophenol	125.2	0	100.0		125	51.5	141				
Surr: 2-Fluorobiphenyl	50.78	0	50.00		102	50.8	122				
Surr: 2-Fluorophenol	69.07	0	100.0		69.1	28.1	120				
Surr: 4-Terphenyl-d14	53.14	0	50.00		106	47.2	131				
Surr: Nitrobenzene-d5	41.37	0	50.00		82.7	42.1	124				
Surr: Phenol-d5	55.88	0	100.0		55.9	16	120				

Sample ID: **1605383-005BMS** Client ID: **089400-050416-SAG-005** Units: **ug/L** Prep Date: **05/06/2016** Run No: **316279**
SampleType: **MS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223607** Analysis Date: **05/06/2016** Seq No: **6811423**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	67.73	10	100.0		67.7	51.4	126				
2-Chlorophenol	56.16	10	100.0		56.2	49.6	120				
4-Chloro-3-methylphenol	65.62	10	100.0		65.6	50.7	130				
4-Nitrophenol	42.24	25	100.0		42.2	20.2	120				
Acenaphthene	69.71	10	100.0		69.7	49.2	123				
N-Nitrosodi-n-propylamine	59.79	10	100.0		59.8	49	135				
Pentachlorophenol	44.27	25	100.0		44.3	41.5	131				
Phenol	25.33	10	100.0		25.3	30.6	120				S
Pyrene	72.55	10	100.0		72.6	50.5	130				
Surr: 2,4,6-Tribromophenol	83.59	0	100.0		83.6	51.5	141				
Surr: 2-Fluorobiphenyl	34.79	0	50.00		69.6	50.8	122				
Surr: 2-Fluorophenol	35.58	0	100.0		35.6	28.1	120				
Surr: 4-Terphenyl-d14	37.89	0	50.00		75.8	47.2	131				
Surr: Nitrobenzene-d5	24.05	0	50.00		48.1	42.1	124				

Qualifiers:
> Greater than Result value
< Less than Result value
B Analyte detected in the associated method blank
BRL Below reporting limit
E Estimated (value above quantitation range)
H Holding times for preparation or analysis exceeded
J Estimated value detected below Reporting Limit
N Analyte not NELAC certified
R RPD outside limits due to matrix
Rpt Lim Reporting Limit
S Spike Recovery outside limits due to matrix

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223607

Sample ID: **1605383-005BMS**	Client ID: **089400-050416-SAG-005**				Units: **ug/L**		Prep Date: **05/06/2016**		Run No: **316279**	
SampleType: **MS**	TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D**				BatchID: **223607**		Analysis Date: **05/06/2016**		Seq No: **6811423**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Phenol-d5	31.18	0	100.0		31.2	16	120				

Sample ID: **1605383-005BMSD**	Client ID: **089400-050416-SAG-005**				Units: **ug/L**		Prep Date: **05/06/2016**		Run No: **316279**	
SampleType: **MSD**	TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D**				BatchID: **223607**		Analysis Date: **05/06/2016**		Seq No: **6811428**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	71.63	10	100.0		71.6	51.4	126	67.73	5.60	29.2	
2-Chlorophenol	64.07	10	100.0		64.1	49.6	120	56.16	13.2	28.2	
4-Chloro-3-methylphenol	67.92	10	100.0		67.9	50.7	130	65.62	3.44	29.7	
4-Nitrophenol	40.34	25	100.0		40.3	20.2	120	42.24	4.60	38.6	
Acenaphthene	74.50	10	100.0		74.5	49.2	123	69.71	6.64	29.3	
N-Nitrosodi-n-propylamine	69.01	10	100.0		69.0	49	135	59.79	14.3	37.6	
Pentachlorophenol	43.40	25	100.0		43.4	41.5	131	44.27	1.98	33.5	
Phenol	27.78	10	100.0		27.8	30.6	120	25.33	9.23	36.3	S
Pyrene	71.59	10	100.0		71.6	50.5	130	72.55	1.33	27.3	
Surr: 2,4,6-Tribromophenol	86.74	0	100.0		86.7	51.5	141	83.59	0	0	
Surr: 2-Fluorobiphenyl	38.52	0	50.00		77.0	50.8	122	34.79	0	0	
Surr: 2-Fluorophenol	42.25	0	100.0		42.2	28.1	120	35.58	0	0	
Surr: 4-Terphenyl-d14	35.62	0	50.00		71.2	47.2	131	37.89	0	0	
Surr: Nitrobenzene-d5	30.07	0	50.00		60.1	42.1	124	24.05	0	0	
Surr: Phenol-d5	35.69	0	100.0		35.7	16	120	31.18	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223638

Sample ID: **MB-223638**	Client ID:			Units: **mg/L**	Prep Date: **05/06/2016**	Run No: **316291**
SampleType: **MBLK**	TestCode: **Mercury, Total SW7470A**			BatchID: **223638**	Analysis Date: **05/06/2016**	Seq No: **6810365**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00020									

Sample ID: **LCS-223638**	Client ID:			Units: **mg/L**	Prep Date: **05/06/2016**	Run No: **316291**
SampleType: **LCS**	TestCode: **Mercury, Total SW7470A**			BatchID: **223638**	Analysis Date: **05/06/2016**	Seq No: **6810366**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004798	0.00020	0.0050		96.0	80	120				

Sample ID: **1605383-005CMS**	Client ID: **089400-050416-SAG-005**			Units: **mg/L**	Prep Date: **05/06/2016**	Run No: **316291**
SampleType: **MS**	TestCode: **Mercury, Total SW7470A**			BatchID: **223638**	Analysis Date: **05/06/2016**	Seq No: **6810369**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004657	0.00020	0.0050		93.1	70	130				

Sample ID: **1605383-005CMSD**	Client ID: **089400-050416-SAG-005**			Units: **mg/L**	Prep Date: **05/06/2016**	Run No: **316291**
SampleType: **MSD**	TestCode: **Mercury, Total SW7470A**			BatchID: **223638**	Analysis Date: **05/06/2016**	Seq No: **6810371**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.004626	0.00020	0.0050		92.5	70	130	0.004657	0.663	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223676

Sample ID: **MB-223676** Client ID: Units: **ug/Kg** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811317**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1´-Biphenyl	BRL	330									
2,4,5-Trichlorophenol	BRL	1700									
2,4,6-Trichlorophenol	BRL	330									
2,4-Dichlorophenol	BRL	330									
2,4-Dimethylphenol	BRL	330									
2,4-Dinitrophenol	BRL	1700									
2,4-Dinitrotoluene	BRL	330									
2,6-Dinitrotoluene	BRL	330									
2-Chloronaphthalene	BRL	330									
2-Chlorophenol	BRL	330									
2-Methylnaphthalene	BRL	330									
2-Methylphenol	BRL	330									
2-Nitroaniline	BRL	1700									
2-Nitrophenol	BRL	330									
3,3´-Dichlorobenzidine	BRL	670									
3-Nitroaniline	BRL	1700									
4,6-Dinitro-2-methylphenol	BRL	1700									
4-Bromophenyl phenyl ether	BRL	330									
4-Chloro-3-methylphenol	BRL	330									
4-Chloroaniline	BRL	330									
4-Chlorophenyl phenyl ether	BRL	330									
4-Methylphenol	BRL	330									
4-Nitroaniline	BRL	1700									
4-Nitrophenol	BRL	1700									
Acenaphthene	BRL	330									
Acenaphthylene	BRL	330									
Acetophenone	BRL	330									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223676

Sample ID: **MB-223676** Client ID: Units: **ug/Kg** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811317**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Anthracene	BRL	330									
Atrazine	BRL	330									
Benz(a)anthracene	BRL	330									
Benzaldehyde	BRL	330									
Benzo(a)pyrene	BRL	330									
Benzo(b)fluoranthene	BRL	330									
Benzo(g,h,i)perylene	BRL	330									
Benzo(k)fluoranthene	BRL	330									
Bis(2-chloroethoxy)methane	BRL	330									
Bis(2-chloroethyl)ether	BRL	330									
Bis(2-chloroisopropyl)ether	BRL	330									
Bis(2-ethylhexyl)phthalate	BRL	330									
Butyl benzyl phthalate	BRL	330									
Caprolactam	BRL	330									
Carbazole	BRL	330									
Chrysene	BRL	330									
Di-n-butyl phthalate	BRL	330									
Di-n-octyl phthalate	BRL	330									
Dibenz(a,h)anthracene	BRL	330									
Dibenzofuran	BRL	330									
Diethyl phthalate	BRL	330									
Dimethyl phthalate	BRL	330									
Fluoranthene	BRL	330									
Fluorene	BRL	330									
Hexachlorobenzene	BRL	330									
Hexachlorobutadiene	BRL	330									
Hexachlorocyclopentadiene	BRL	660									

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223676

Sample ID: **MB-223676** Client ID: Units: **ug/Kg** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MBLK** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811317**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Hexachloroethane	BRL	330									
Indeno(1,2,3-cd)pyrene	BRL	330									
Isophorone	BRL	330									
N-Nitrosodi-n-propylamine	BRL	330									
N-Nitrosodiphenylamine	BRL	330									
Naphthalene	BRL	330									
Nitrobenzene	BRL	330									
Pentachlorophenol	BRL	1700									
Phenanthrene	BRL	330									
Phenol	BRL	330									
Pyrene	BRL	330									
Surr: 2,4,6-Tribromophenol	2992	0	3333		89.8	42.4	130				
Surr: 2-Fluorobiphenyl	1269	0	1667		76.2	51.5	120				
Surr: 2-Fluorophenol	2207	0	3333		66.2	41.1	120				
Surr: 4-Terphenyl-d14	1347	0	1667		80.8	52.7	117				
Surr: Nitrobenzene-d5	971.0	0	1667		58.3	41.4	120				
Surr: Phenol-d5	2273	0	3333		68.2	47.6	120				

Sample ID: **LCS-223676** Client ID: Units: **ug/Kg** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **LCS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811327**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	2823	330	3333		84.7	64.8	117				
2-Chlorophenol	2627	330	3333		78.8	61.7	120				
4-Chloro-3-methylphenol	2678	330	3333		80.3	63.7	119				
4-Nitrophenol	1953	1700	3333		58.6	40.1	122				
Acenaphthene	3044	330	3333		91.3	69.6	120				
N-Nitrosodi-n-propylamine	2782	330	3333		83.4	61.5	132				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223676

Sample ID: **LCS-223676** Client ID: Units: **ug/Kg** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **LCS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811327**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Pentachlorophenol	2436	1700	3333		73.1	40.2	121				
Phenol	2265	330	3333		68.0	52.8	120				
Pyrene	2911	330	3333		87.3	64	124				
Surr: 2,4,6-Tribromophenol	3765	0	3333		113	42.4	130				
Surr: 2-Fluorobiphenyl	1638	0	1667		98.3	51.5	120				
Surr: 2-Fluorophenol	2587	0	3333		77.6	41.1	120				
Surr: 4-Terphenyl-d14	1536	0	1667		92.1	52.7	117				
Surr: Nitrobenzene-d5	1254	0	1667		75.2	41.4	120				
Surr: Phenol-d5	2823	0	3333		84.7	47.6	120				

Sample ID: **1605383-004BMS** Client ID: **089400-050416-SAG-004** Units: **ug/Kg-dry** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811361**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	2395	370	3688		65.0	49.2	120				
2-Chlorophenol	3020	370	3688		81.9	51.7	120				
4-Chloro-3-methylphenol	3448	370	3688		93.5	52.9	120				
4-Nitrophenol	BRL	1900	3688		25.8	30.8	120				S
Acenaphthene	3415	370	3688		92.6	52.2	120				
N-Nitrosodi-n-propylamine	3270	370	3688		88.7	51.7	125				
Pentachlorophenol	2569	1900	3688		69.7	39.4	120				
Phenol	2747	370	3688		74.5	45.4	120				
Pyrene	3010	370	3688		81.6	49.1	120				
Surr: 2,4,6-Tribromophenol	4520	0	3688		123	42.4	130				
Surr: 2-Fluorobiphenyl	1822	0	1844		98.8	51.5	120				
Surr: 2-Fluorophenol	2815	0	3688		76.4	41.1	120				
Surr: 4-Terphenyl-d14	1576	0	1844		85.5	52.7	117				
Surr: Nitrobenzene-d5	1424	0	1844		77.2	41.4	120				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223676

Sample ID: **1605383-004BMS** Client ID: **089400-050416-SAG-004** Units: **ug/Kg-dry** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MS** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811361**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Phenol-d5	3275	0	3688		88.8	47.6	120				

Sample ID: **1605383-004BMSD** Client ID: **089400-050416-SAG-004** Units: **ug/Kg-dry** Prep Date: **05/06/2016** Run No: **316278**
SampleType: **MSD** TestCode: **TCL-SEMIVOLATILE ORGANICS SW8270D** BatchID: **223676** Analysis Date: **05/06/2016** Seq No: **6811362**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	2486	370	3688		67.4	49.2	120	2395	3.75	23.4	
2-Chlorophenol	3370	370	3688		91.4	51.7	120	3020	11.0	29.9	
4-Chloro-3-methylphenol	3802	370	3688		103	52.9	120	3448	9.77	45.7	
4-Nitrophenol	BRL	1900	3688		28.3	30.8	120	949.9	0	30.8	S
Acenaphthene	3751	370	3688		102	52.2	120	3415	9.37	24.4	
N-Nitrosodi-n-propylamine	3531	370	3688		95.8	51.7	125	3270	7.68	19.7	
Pentachlorophenol	2471	1900	3688		67.0	39.4	120	2569	3.89	26.5	
Phenol	2999	370	3688		81.3	45.4	120	2747	8.78	20.7	
Pyrene	3206	370	3688		86.9	49.1	120	3010	6.30	33.4	
Surr: 2,4,6-Tribromophenol	4971	0	3688		135	42.4	130	4520	0	0	S
Surr: 2-Fluorobiphenyl	1999	0	1844		108	51.5	120	1822	0	0	
Surr: 2-Fluorophenol	3178	0	3688		86.2	41.1	120	2815	0	0	
Surr: 4-Terphenyl-d14	1673	0	1844		90.8	52.7	117	1576	0	0	
Surr: Nitrobenzene-d5	1625	0	1844		88.2	41.4	120	1424	0	0	
Surr: Phenol-d5	3577	0	3688		97.0	47.6	120	3275	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223760

Sample ID: **MB-223760**	Client ID:					Units: **mg/Kg**		Prep Date: **05/10/2016**		Run No: **316448**	
SampleType: **MBLK**	TestCode: **TOTAL MERCURY SW7471B**					BatchID: **223760**		Analysis Date: **05/10/2016**		Seq No: **6814717**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.100									

Sample ID: **LCS-223760**	Client ID:					Units: **mg/Kg**		Prep Date: **05/10/2016**		Run No: **316448**	
SampleType: **LCS**	TestCode: **TOTAL MERCURY SW7471B**					BatchID: **223760**		Analysis Date: **05/10/2016**		Seq No: **6814718**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.4210	0.100	0.4000		105	80	120				

Sample ID: **1605210-002CMS**	Client ID:					Units: **mg/Kg-dry**		Prep Date: **05/10/2016**		Run No: **316448**	
SampleType: **MS**	TestCode: **TOTAL MERCURY SW7471B**					BatchID: **223760**		Analysis Date: **05/10/2016**		Seq No: **6814721**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.5108	0.121	0.4827	0.03186	99.2	70	130				

Sample ID: **1605210-002CMSD**	Client ID:					Units: **mg/Kg-dry**		Prep Date: **05/10/2016**		Run No: **316448**	
SampleType: **MSD**	TestCode: **TOTAL MERCURY SW7471B**					BatchID: **223760**		Analysis Date: **05/10/2016**		Seq No: **6814722**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.5001	0.121	0.4827	0.03186	97.0	70	130	0.5108	2.10	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223775

Sample ID: **MB-223775** Client ID: Units: **ug/L** Prep Date: **05/09/2016** Run No: **316334**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/09/2016** Seq No: **6813201**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223775

Sample ID: **MB-223775** Client ID: Units: **ug/L** Prep Date: **05/09/2016** Run No: **316334**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/09/2016** Seq No: **6813201**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	35.35	0	50.00		70.7	70.7	125				
Surr: Dibromofluoromethane	51.86	0	50.00		104	82.2	120				
Surr: Toluene-d8	47.75	0	50.00		95.5	81.8	120				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223775

Sample ID: **LCS-223775** Client ID: Units: **ug/L** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/10/2016** Seq No: **6813808**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	54.68	5.0	50.00		109	65.3	137				
Benzene	50.79	5.0	50.00		102	74.9	123				
Chlorobenzene	48.24	5.0	50.00		96.5	73.9	124				
Toluene	53.00	5.0	50.00		106	75	124				
Trichloroethene	46.94	5.0	50.00		93.9	73.1	128				
Surr: 4-Bromofluorobenzene	50.08	0	50.00		100	70.7	125				
Surr: Dibromofluoromethane	52.57	0	50.00		105	82.2	120				
Surr: Toluene-d8	48.72	0	50.00		97.4	81.8	120				

Sample ID: **1605383-005AMS** Client ID: **089400-050416-SAG-005** Units: **ug/L** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/10/2016** Seq No: **6814680**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.39	5.0	50.00		103	60	150				
Benzene	49.17	5.0	50.00		98.3	70.1	132				
Chlorobenzene	48.53	5.0	50.00		97.1	70.9	131				
Toluene	51.98	5.0	50.00		104	70.1	133				
Trichloroethene	48.56	5.0	50.00		97.1	70	136				
Surr: 4-Bromofluorobenzene	49.46	0	50.00		98.9	70.7	125				
Surr: Dibromofluoromethane	51.89	0	50.00		104	82.2	120				
Surr: Toluene-d8	48.87	0	50.00		97.7	81.8	120				

Sample ID: **1605383-005AMSD** Client ID: **089400-050416-SAG-005** Units: **ug/L** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/10/2016** Seq No: **6814681**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	51.81	5.0	50.00		104	60	150	51.39	0.814	17.7	
Benzene	47.22	5.0	50.00		94.4	70.1	132	49.17	4.05	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223775

Sample ID: **1605383-005AMSD** Client ID: **089400-050416-SAG-005** Units: **ug/L** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223775** Analysis Date: **05/10/2016** Seq No: **6814681**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	45.47	5.0	50.00		90.9	70.9	131	48.53	6.51	20	
Toluene	49.37	5.0	50.00		98.7	70.1	133	51.98	5.15	20	
Trichloroethene	45.95	5.0	50.00		91.9	70	136	48.56	5.52	20	
Surr: 4-Bromofluorobenzene	46.37	0	50.00		92.7	70.7	125	49.46	0	0	
Surr: Dibromofluoromethane	49.58	0	50.00		99.2	82.2	120	51.89	0	0	
Surr: Toluene-d8	47.05	0	50.00		94.1	81.8	120	48.87	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223780

Sample ID: **MB-223780** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316427**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223780** Analysis Date: **05/09/2016** Seq No: **6815767**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	250									
1,1,2,2-Tetrachloroethane	BRL	250									
1,1,2-Trichloroethane	BRL	250									
1,1-Dichloroethane	BRL	250									
1,1-Dichloroethene	BRL	250									
1,2,4-Trichlorobenzene	BRL	250									
1,2-Dibromo-3-chloropropane	BRL	250									
1,2-Dibromoethane	BRL	250									
1,2-Dichlorobenzene	BRL	250									
1,2-Dichloroethane	BRL	250									
1,2-Dichloropropane	BRL	250									
1,3-Dichlorobenzene	BRL	250									
1,4-Dichlorobenzene	BRL	250									
2-Butanone	BRL	2500									
2-Hexanone	BRL	500									
4-Methyl-2-pentanone	BRL	500									
Acetone	BRL	5000									
Benzene	BRL	250									
Bromodichloromethane	BRL	250									
Bromoform	BRL	250									
Bromomethane	BRL	250									
Carbon disulfide	BRL	500									
Carbon tetrachloride	BRL	250									
Chlorobenzene	BRL	250									
Chloroethane	BRL	500									
Chloroform	BRL	250									
Chloromethane	BRL	500									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223780

Sample ID: **MB-223780** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316427**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223780** Analysis Date: **05/09/2016** Seq No: **6815767**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	250									
cis-1,3-Dichloropropene	BRL	250									
Cyclohexane	BRL	250									
Dibromochloromethane	BRL	250									
Dichlorodifluoromethane	BRL	500									
Ethylbenzene	BRL	250									
Freon-113	BRL	500									
Isopropylbenzene	BRL	250									
m,p-Xylene	BRL	250									
Methyl acetate	BRL	250									
Methyl tert-butyl ether	BRL	250									
Methylcyclohexane	BRL	250									
Methylene chloride	BRL	1000									
o-Xylene	BRL	250									
Styrene	BRL	250									
Tetrachloroethene	BRL	250									
Toluene	BRL	250									
trans-1,2-Dichloroethene	BRL	250									
trans-1,3-Dichloropropene	BRL	250									
Trichloroethene	BRL	250									
Trichlorofluoromethane	BRL	250									
Vinyl chloride	BRL	500									
Surr: 4-Bromofluorobenzene	2315	0	2500		92.6	70	128				
Surr: Dibromofluoromethane	2488	0	2500		99.5	78.2	128				
Surr: Toluene-d8	2479	0	2500		99.2	76.5	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223780

Sample ID: **LCS-223780** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316427**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223780** Analysis Date: **05/09/2016** Seq No: **6815766**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2558	250	2500		102	69.9	145				
Benzene	2610	250	2500		104	72.3	130				
Chlorobenzene	2564	250	2500		103	69	130				
Toluene	2650	250	2500		106	71.1	130				
Trichloroethene	2520	250	2500		101	71.7	136				
Surr: 4-Bromofluorobenzene	2318	0	2500		92.7	70	128				
Surr: Dibromofluoromethane	2278	0	2500		91.1	78.2	128				
Surr: Toluene-d8	2321	0	2500		92.8	76.5	116				

Sample ID: **1605670-003AMS** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223780** Analysis Date: **05/10/2016** Seq No: **6815913**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	5319	580	5800		91.7	56.6	151				
Benzene	5545	580	5800		95.6	70.4	130				
Chlorobenzene	5093	580	5800		87.8	67.5	132				
Toluene	5995	580	5800		103	70.4	130				
Trichloroethene	5189	580	5800		89.5	70.1	137				
Surr: 4-Bromofluorobenzene	5737	0	5800		98.9	70	128				
Surr: Dibromofluoromethane	5940	0	5800		102	78.2	128				
Surr: Toluene-d8	5756	0	5800		99.2	76.5	116				

Sample ID: **1605670-003AMSD** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316453**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223780** Analysis Date: **05/10/2016** Seq No: **6815914**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	5915	580	5800		102	56.6	151	5319	10.6	20.4	
Benzene	5412	580	5800		93.3	70.4	130	5545	2.44	16.9	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223780

Sample ID: **1605670-003AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316453**
BatchID: **223780** Analysis Date: **05/10/2016** Seq No: **6815914**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	5210	580	5800		89.8	67.5	132	5093	2.27	14.6	
Toluene	5599	580	5800		96.5	70.4	130	5995	6.84	16.6	
Trichloroethene	5050	580	5800		87.1	70.1	137	5189	2.72	17	
Surr: 4-Bromofluorobenzene	5862	0	5800		101	70	128	5737	0	0	
Surr: Dibromofluoromethane	6032	0	5800		104	78.2	128	5940	0	0	
Surr: Toluene-d8	5732	0	5800		98.8	76.5	116	5756	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223781

Sample ID: **MB-223781** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316323**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813453**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	100									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	10									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223781

Sample ID: **MB-223781** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316323**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813453**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	20									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	10									
Surr: 4-Bromofluorobenzene	46.17	0	50.00		92.3	70	128				
Surr: Dibromofluoromethane	50.72	0	50.00		101	78.2	128				
Surr: Toluene-d8	48.32	0	50.00		96.6	76.5	116				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223781

Sample ID: **LCS-223781** Client ID: Units: **ug/Kg** Prep Date: **05/09/2016** Run No: **316323**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813452**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	57.82	5.0	50.00		116	69.9	145				
Benzene	52.52	5.0	50.00		105	72.3	130				
Chlorobenzene	55.93	5.0	50.00		112	69	130				
Toluene	51.46	5.0	50.00		103	71.1	130				
Trichloroethene	45.66	5.0	50.00		91.3	71.7	136				
Surr: 4-Bromofluorobenzene	47.06	0	50.00		94.1	70	128				
Surr: Dibromofluoromethane	50.39	0	50.00		101	78.2	128				
Surr: Toluene-d8	47.21	0	50.00		94.4	76.5	116				

Sample ID: **1605281-001AMS** Client ID: Units: **ug/Kg-dry** Prep Date: **05/09/2016** Run No: **316323**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813471**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	61.34	5.7	56.77		108	56.6	151				
Benzene	52.80	5.7	56.77		93.0	70.4	130				
Chlorobenzene	54.66	5.7	56.77		96.3	67.5	132				
Toluene	52.02	5.7	56.77		91.6	70.4	130				
Trichloroethene	45.39	5.7	56.77		79.9	70.1	137				
Surr: 4-Bromofluorobenzene	50.13	0	56.77		88.3	70	128				
Surr: Dibromofluoromethane	58.38	0	56.77		103	78.2	128				
Surr: Toluene-d8	55.72	0	56.77		98.1	76.5	116				

Sample ID: **1605281-001AMSD** Client ID: Units: **ug/Kg-dry** Prep Date: **05/09/2016** Run No: **316323**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813472**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	53.54	5.7	56.77		94.3	56.6	151	61.34	13.6	20.4	
Benzene	52.78	5.7	56.77		93.0	70.4	130	52.80	0.043	16.9	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223781

Sample ID: **1605281-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/Kg-dry** Prep Date: **05/09/2016** Run No: **316323**
BatchID: **223781** Analysis Date: **05/09/2016** Seq No: **6813472**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	54.54	5.7	56.77		96.1	67.5	132	54.66	0.229	14.6	
Toluene	50.98	5.7	56.77		89.8	70.4	130	52.02	2.01	16.6	
Trichloroethene	44.31	5.7	56.77		78.0	70.1	137	45.39	2.41	17	
Surr: 4-Bromofluorobenzene	49.28	0	56.77		86.8	70	128	50.13	0	0	
Surr: Dibromofluoromethane	57.22	0	56.77		101	78.2	128	58.38	0	0	
Surr: Toluene-d8	55.33	0	56.77		97.5	76.5	116	55.72	0	0	

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223790

Sample ID: **MB-223790** Client ID: Units: **mg/L** Prep Date: **05/10/2016** Run No: **316614**
SampleType: **MBLK** TestCode: **METALS, TOTAL SW6010D** BatchID: **223790** Analysis Date: **05/11/2016** Seq No: **6818293**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.0100									
Barium	BRL	0.0200									
Cadmium	BRL	0.0050									
Chromium	BRL	0.0100									
Lead	BRL	0.0100									
Selenium	BRL	0.0200									
Silver	BRL	0.0100									

Sample ID: **LCS-223790** Client ID: Units: **mg/L** Prep Date: **05/10/2016** Run No: **316614**
SampleType: **LCS** TestCode: **METALS, TOTAL SW6010D** BatchID: **223790** Analysis Date: **05/11/2016** Seq No: **6818294**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.048	0.0500	1.000		105	80	120				
Barium	1.051	0.0200	1.000		105	80	120				
Cadmium	1.048	0.0050	1.000		105	80	120				
Chromium	1.038	0.0100	1.000		104	80	120				
Lead	1.044	0.0100	1.000		104	80	120				
Selenium	1.046	0.0200	1.000	0.006546	104	80	120				
Silver	0.1042	0.0100	0.1000		104	80	120				

Sample ID: **1605291-005DMS** Client ID: Units: **mg/L** Prep Date: **05/10/2016** Run No: **316614**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **223790** Analysis Date: **05/11/2016** Seq No: **6818298**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.076	0.0500	1.000	0.03339	104	75	125				
Barium	1.019	0.0200	1.000	0.002985	102	75	125				
Cadmium	1.038	0.0050	1.000	0.001606	104	75	125				
Chromium	1.014	0.0100	1.000	0.001981	101	75	125				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223790

Sample ID: **1605291-005DMS** Client ID:
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D**
Units: **mg/L** Prep Date: **05/10/2016** Run No: **316614**
BatchID: **223790** Analysis Date: **05/11/2016** Seq No: **6818298**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.001	0.0100	1.000		100	75	125				
Selenium	1.072	0.0200	1.000	0.02811	104	75	125				
Silver	0.1025	0.0100	0.1000	0.0003192	102	75	125				

Sample ID: **1605291-005DMSD** Client ID:
SampleType: **MSD** TestCode: **METALS, TOTAL SW6010D**
Units: **mg/L** Prep Date: **05/10/2016** Run No: **316614**
BatchID: **223790** Analysis Date: **05/11/2016** Seq No: **6818299**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	1.096	0.0500	1.000	0.03339	106	75	125	1.076	1.91	20	
Barium	1.035	0.0200	1.000	0.002985	103	75	125	1.019	1.51	20	
Cadmium	1.053	0.0050	1.000	0.001606	105	75	125	1.038	1.42	20	
Chromium	1.034	0.0100	1.000	0.001981	103	75	125	1.014	1.95	20	
Lead	1.014	0.0100	1.000		101	75	125	1.001	1.31	20	
Selenium	1.099	0.0200	1.000	0.02811	107	75	125	1.072	2.48	20	
Silver	0.1039	0.0100	0.1000	0.0003192	104	75	125	0.1025	1.37	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223843

Sample ID: **MB-223843** Client ID: Units: **mg/Kg** Prep Date: **05/11/2016** Run No: **316702**
SampleType: **MBLK** TestCode: **METALS, TOTAL SW6010D** BatchID: **223843** Analysis Date: **05/12/2016** Seq No: **6820310**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	5.00									
Barium	BRL	5.00									
Cadmium	BRL	2.50									
Chromium	BRL	2.50									
Lead	BRL	5.00									
Selenium	BRL	5.00									
Silver	BRL	2.50									

Sample ID: **LCS-223843** Client ID: Units: **mg/Kg** Prep Date: **05/11/2016** Run No: **316702**
SampleType: **LCS** TestCode: **METALS, TOTAL SW6010D** BatchID: **223843** Analysis Date: **05/12/2016** Seq No: **6820311**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	47.09	5.00	50.00		94.2	80	120				
Barium	48.28	5.00	50.00		96.6	80	120				
Cadmium	47.41	2.50	50.00		94.8	80	120				
Chromium	48.28	2.50	50.00	0.05600	96.4	80	120				
Lead	47.06	5.00	50.00		94.1	80	120				
Selenium	46.99	5.00	50.00		94.0	80	120				
Silver	4.784	2.50	5.000		95.7	80	120				

Sample ID: **1605383-001CMS** Client ID: **089400-050416-SAG-001** Units: **mg/Kg-dry** Prep Date: **05/11/2016** Run No: **316702**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **223843** Analysis Date: **05/12/2016** Seq No: **6820313**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	53.02	5.84	58.38	1.172	88.8	75	125				
Barium	84.16	5.84	58.38	28.05	96.1	75	125				
Cadmium	54.13	2.92	58.38	0.1330	92.5	75	125				
Chromium	69.16	2.92	58.38	11.56	98.7	75	125				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: GHD Services, Inc.
Project Name: Epic - Savannah North Terminal
Workorder: 1605383

ANALYTICAL QC SUMMARY REPORT

BatchID: 223843

Sample ID: **1605383-001CMS** Client ID: **089400-050416-SAG-001** Units: **mg/Kg-dry** Prep Date: **05/11/2016** Run No: **316702**
SampleType: **MS** TestCode: **METALS, TOTAL SW6010D** BatchID: **223843** Analysis Date: **05/12/2016** Seq No: **6820313**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	58.64	5.84	58.38	6.092	90.0	75	125				
Selenium	51.67	5.84	58.38		88.5	75	125				
Silver	5.385	2.92	5.838		92.2	75	125				

Sample ID: **1605383-001CMSD** Client ID: **089400-050416-SAG-001** Units: **mg/Kg-dry** Prep Date: **05/11/2016** Run No: **316702**
SampleType: **MSD** TestCode: **METALS, TOTAL SW6010D** BatchID: **223843** Analysis Date: **05/12/2016** Seq No: **6820314**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	54.06	5.82	58.19	1.172	90.9	75	125	53.02	1.93	20	
Barium	87.53	5.82	58.19	28.05	102	75	125	84.16	3.93	20	
Cadmium	55.09	2.91	58.19	0.1330	94.4	75	125	54.13	1.76	20	
Chromium	67.82	2.91	58.19	11.56	96.7	75	125	69.16	1.97	20	
Lead	61.76	5.82	58.19	6.092	95.7	75	125	58.64	5.18	20	
Selenium	52.40	5.82	58.19		90.1	75	125	51.67	1.41	20	
Silver	5.438	2.91	5.819		93.5	75	125	5.385	0.970	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Appendix C
Engineering Fees Summary
March 7, 2016 through May 22, 2016

Project History Report

BST

Time: 08:00:33
Date: 5/25/2016

From Period: 07/2016 **Thru Period:** 12/2016

Summary Selection: Employee Responsible

Level: Project **Resp Type:** PM **Co Code:** **Use Maps:** N
Map Code: **Map Level:** **A/S Values:** S **Value:** John Dizinno

Multi Level Selection: None

Restrict By Ind: None **Budget:** Current **Status:** Active
Min Value: **Currency:** Project **Chargeable:** Both Chargeable and Non Chargeable
Max Value: **Project w/o Activity:** N

Project: 089400-EPIC - Savannah Asphalt Terminal

Phase 01-Initial Project Tasks **Task**
Co **Org**
Rev Ttype

Account	EVC Code	EVC Name	Cls	Actv	L/E	R/O	B/N	Hours	Effort
5010001	1002588	Pyle, Robert T.	110	O	L	R	B	9.50	1,577.00
5010001	1000888	Dizinno, John	220	F	L	R	B	8.00	1,184.00
5010001	1000888	Dizinno, John	220	O	L	R	B	35.50	5,254.00
5010001	1002742	Rousseau, Matthew	220	O	L	R	B	0.50	74.00
5010001	1000888	Dizinno, John	350	F	L	R	B	35.50	4,082.50
5010001	1000888	Dizinno, John	350	O	L	R	B	7.00	805.00
5010001	1000045	Al-Marhoun, Zachary	362	F	L	R	B	77.00	7,315.00
5010001	1000045	Al-Marhoun, Zachary	362	O	L	R	B	98.00	9,310.00
5010001	1004405	Bodiford, Madison R	362	O	L	R	B	36.25	3,443.75
5010001	1000284	Blanchard, Kelly	425	F	L	R	B	3.00	375.00
5010001	1000366	Brennan, Deborah	630	OC03	L	R	B	1.00	115.00
5010001	1000366	Brennan, Deborah	630	OC04	L	R	B	0.50	57.50
5010001	1000931	Doyle, William	675	O	L	R	B	1.00	100.00
5010001	1001284	Grace, Steven	731	F	L	R	B	58.00	4,640.00
5010001	1001328	Guempel, Christy	732	O	L	R	B	1.00	80.00
5010001	1002966	Singleton, Amy	741	O	L	R	B	2.00	160.00
5010001	1003143	Tassin, Holly	824	O	L	R	B	6.50	487.50
5010001	1001810	Lang, Jonathon	879	OD01	L	R	B	0.50	58.00
5020001	1001472	Hollister-Bay, Terri	906	O	L	R	B	0.50	22.50
5710102	1000045	Al-Marhoun, Zachary		****	E		B	0.00	502.79
5710108	1000045	Al-Marhoun, Zachary		****	E		B	0.00	120.00
5710108	1000888	Dizinno, John		****	E		B	0.00	0.00
5710108	1001284	Grace, Steven		****	E		B	0.00	80.00
5710200	1000045	Al-Marhoun, Zachary		****	E		B	0.00	47.47
5710405	1001284	Grace, Steven		****	E		B	0.00	348.84
5710550	UIT	Information Technolo		401	E		B	0.00	0.00
5710617	40GIL833	Grainger		520	E		B	0.00	1,153.94

BST

Project History Report

Time: 08:00:33
Date: 5/25/2016

Account	EVC Code	EVC Name	Cls	Actv	L/E	R/O	B/N	Hours	Effort
5710617	40QEDENV	QED Environmental Sy		520	E		B	0.00	13,061.23
5710626	40AIR609	Airgas USA LLC		520	E		B	0.00	1,176.44
5710626	1000045	Al-Marhoun, Zachary		****	E		B	0.00	73.61
5710626	1000888	Dizinno, John		****	E		B	0.00	186.86
6290001	1001284	Grace, Steven		****	E		B	0.00	0.00
Totals								381.25	55,891.93

END OF REPORT

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