PHASE II
ENVIRONMENTAL SITE ASSESSMENT REPORT

WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

WBS NO. S-000035-0205-3

ESTABLISHED 1959

PREPARED FOR:

KUO &
ASSOCIATES, INC.

BY:

ASSOCIATED TESTING LABORATORIES, INC.
HOUSTON, TEXAS

REPORT NO E15-103
MARCH 2015

KUO and Associates, Inc.
10700 Richmond Ave. SUITE 113
Houston, TX 77042

RE: ***PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT***
Water Line Replacement in Dodson Area
WBS NO. S-000035-0205-3
HOUSTON, TEXAS
ATL REPORT NO.: E15-103

Associated Testing Laboratories (ATL) is pleased to submit the following Phase II ESA report for the above-mentioned project.

Thank you for considering ATL for this project. We appreciate the opportunity to conduct environmental services for this project and are looking forward to serving you again on future projects. The following provides a brief summary of the Phase II ESA results:

EXECUTIVE SUMMARY

ATL performed a Limited Phase II Environmental Site Assessment (ESA) for the Water Line Replacement in the Dodson Area in Houston, Texas. Please refer to Figures section for the location and site details. The following is reported:

- Twenty one (21) environmental soil borings were completed to a depth of 20 feet at the twelve (12) sites of Recognized Environmental Conditions (RECs). Soil samples were screened utilizing a MiniRAE Photo Ionization Detector (PID) instrument in the field. PID readings and visual inspection directed the submittal of soil samples and the sample with the greatest PID reading was submitted from each soil boring. In the event of no significant PID readings, default soil samples were collected from various representative depths and submitted for laboratory analyses.

  Soil samples were analyzed for total petroleum hydrocarbons (TPH) and methyl tert-butyl ether/benzene, toluene, ethyl-benzene and total xylenes (MTBE/BTEX) for the LPST Sites. The sample collected from the REC site that was a dry cleaning facility was analyzed for VOCs.

- During the Phase II ESA, groundwater was collected at six (6) of the twelve (12) sites by installing 1-inch temporary wells. The wells were pulled, plugged and abandoned following sample collection.

The following provides a summary of the soil and groundwater laboratory analytical results for the REC locations at:

- Volatile organic compounds and total petroleum hydrocarbons in soil or groundwater samples were reported to be detected in the laboratory sample detection limit or non-detect at the associated REC locations:
    1. 7702 Eastex Freeway, Houston, TX.
    2. Homestead Road, Houston, TX.

- Based on the laboratory analytical results, no soil concentrations exceed TCEQ TRRP Total Soil Combined ($^{Tot}Soil_{Comb}$) Protective Concentration Levels (PCLs) for a 0.5-acre residential use and are not a concern to construction workers. Additionally, no soil exceeds TCEQ TRRP Groundwater Soil Protective ($^{GW}Soil_{Ing}$) PCLs.

- Groundwater collected at the following locations had detections:
    1. 7702 Eastex Freeway, Houston, TX.
    2. 4902 Laura Koppe, Houston, TX.

RECOMMENDATIONS

ATL performed a Limited Phase II Environmental Site Assessment (ESA) for the Water Line Replacement in Dodson Area in Houston, Texas. Based on field observations and soil laboratory analytical results, the following is noted:

- Soil conditions are not a concern to construction workers. Based on the PID readings, air monitoring is required at the southern extent of the 7702 Eastex Freeway REC location and at the western extent of the work being performed in Parker Road. Based on the Phase II ESA results, additional environmental investigation work is not warranted. Additionally, the following is noted for the REC locations:

  7702 Eastex Freeway

  - Due to the minor soil laboratory analytical detections in soil boring TW-05, the area is a potential contaminated area (PPCA).
  - Additionally, a TPH (C6-C12) detection of 0.102 mg/L was reported in the laboratory analytical results from groundwater sample from boring TW-05. The TPH concentration exceeds the TCEQ TRRP Groundwater ($^{GW}GW_{Ing}$) PCLs of 0.98 mg/L for TPH. Due to this laboratory analytical detection, the area shall be defined as a PPCA. Special soil and groundwater handling practices will be required at the REC location.

Groundwater shall be contained, sampled, discharged, or disposed as appropriate using applicable permits. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

The Station Nos. are from 4+50 to 5+25 (Eastex Fwy. frontage).

Clarington Street

- An ethyl-benzene concentration of 0.0026 mg/L was reported in the laboratory analytical results from groundwater sample from boring TW-06. Due to this laboratory analytical detection, the area shall be defined as a PPCA. Special groundwater handling practices will be required at the REC location. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

  The Station Nos. are from 10+00 to 11+00 (Clarington Street).

Parker Road

- Due to the minor soil laboratory analytical detections in soil boring SB-15, the area is a PPCA. Low level detections of methylene chloride (0.0072 mg/L) and n-Propylbenzene (0.011 mg/kg) were reported in SB-15. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

  The Station Nos. are from 11+00 to 12+00 (Parker Road).

Regards,

Jasbir Singh, PE
President

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1.0 INTRODUCTION

Public water lines are to be replaced in the Dodson Area. The water line replacement project is located north of Highway 610 in the vicinity of US Highway 59 North in Houston, Texas. Phase II ESA activities occurred at twelve REC locations along the proposed water line alignment including: Jensen Drive, Friendly Drive, Laura Koppe Road, Homestead Road, and Eastex Freeway. FIGURE 1 through FIGURE 7 in the figures section identifies the investigated areas that were identified as potential recognized environmental conditions (RECs).

2.0 SCOPE-OF-WORK

Associated Testing Laboratories (ATL) was retained by Kuo & Associates, Inc. to evaluate whether the project alignment has been affected by eleven (11) leaking petroleum storage tank (LPST) facilities and one (1) Dry Cleaner facility. The regulatory facilities along project alignment are as follows (REC locations):

1. LPST facilities located at 9302 and 9303 Jensen Drive
2. LPST facilities located at 8917 Friendly Street and 4114 Laura Koppe Road
3. LPST facilities located at 3616 Laura Koppe Road
4. LPST facilities located at 7702 Eastex Freeway
5. LPST facilities located at 4902 Laura Koppe Road
6. LPST Facilities located at 10101 Homestead, 10102 Homestead, 10030 Homestead, and 10039 Homestead. A dry cleaner facility located at 7140 Parker Road.

Sampling was conducted to determine whether petroleum contamination is present at the REC locations. The following Phase II Assessment activities were performed:

- Conducted an investigation of facilities with the potential for environmental conditions as identified in a previously conducted Phase I ESA for the project alignment.
- Completed a Texas Excavation Safety (Texas 811) notification.
- Soil sampling locations placed at equidistant locations to provide adequate coverage of the REC locations. Submitted soil and groundwater samples for laboratory analytical testing based upon field observations (visual and olfactory) and field screening.
- Conducted continuous field screening of soil cores at 1.0-foot intervals utilizing a photo-ionization detector (PID) calibrated to 100 ppm isobutylene standard.
- Completed twenty-one (21) soil borings along the project alignment.

- Submitted soil samples for laboratory analyses of volatile organic compounds or methyl tert-butyl ether/benzene, toluene, ethyl-benzene and total xylenes (MTBE/BTEX) and total petroleum hydrocarbons (TPH).
- One-inch diameter temporary wells were installed at 6 locations to collect groundwater samples for analysis of methyl tert-butyl ether/benzene, toluene, ethyl-benzene and total xylenes (MTBE/BTEX) and total petroleum hydrocarbons (TPH).
- Detailed site assessment activities, reviewed laboratory analytical results, and presented the results and conclusions in a Limited Phase II ESA investigation report.

3.0 PHASE II ASSESSMENT ACTIVITIES

On February 18th, 19th, and 20th, 2015, ATL completed twenty-one (21) soil borings, SB-1 through SB-15 and TW-1 through TW-6 at select locations along the project alignment. The soil borings were completed to a depth of 20 feet below ground surface (bgs).

Soil borings were advanced utilizing a truck-mounted hydraulically-driven drilling rig with 4-foot stainless core barrels. Soil samples were continuously collected at 1-foot intervals and field screened utilizing a photo-ionization detector (PID). PID field screening was predominantly non-detect and ranged from 0.0 ppm to 1,123 ppm. Geologic stratigraphy (lithology) and subsurface characteristics were recorded by the field geologist. FIGURES 1 through 7 provide investigated site details and soil boring locations. Soil boring logs are presented in APPENDIX A.

Prior to the initial soil boring and between each 4-foot advancement, all sampling devices were thoroughly cleaned and decontaminated using Alconox detergent, water and distilled water. Soil samples were obtained by the environmental professional utilizing appropriate sampling tools and wearing clean, disposable gloves. Disposable nitrile gloves were changed between each sample collection. One (1) discrete (grab) sample was collected from each 1-foot interval of the soil borings. The sample was placed in a disposable bag for headspace screening. The sample with the highest PID reading from each boring location was placed in a 4-ounce sterile glass container furnished by the testing laboratory. Each container was filled to capacity with soil to limit the amount of headspace present. All samples were labeled in the field and stored at approximately $4^{o}C$ prior to submission to A & B Laboratories in Houston, Texas for laboratory analyses. Chain-of-custody documentation accompanied the samples in accordance with standard quality assurance and quality control measures.

3.1 SOIL SAMPLING (Jensen Drive)

Three (3) soil borings, SB-01, TW-01, and SB-02, were advanced in Hurley Street, East of Jensen Drive. The soil borings were completed near the LPST Sites located at 9302 and 9303 Jensen Drive. PID readings were non-detect (0.0 ppm) to 0.8 ppm for the soil boring soil cores. The soil sample interval exhibiting the greatest PID reading from each soil boring, if any, was submitted for laboratory analyses; and one soil sample was submitted from each soil boring. Groundwater was collected from the TW-01 location. FIGURE No. 2 provides site details and soil boring locations.

3.2 SOIL SAMPLING (Friendly Street)

Three (3) soil borings, SB-03, TW-02 and SB-04, were advanced in Friendly Street, north of Laura Koppe Road near two (2) leaking petroleum storage tank (LPST) facilities located at 8917 Friendly Street and 4114 Laura Koppe Road. PID readings ranged from non-detect (0.0 ppm) to 2.0 ppm. Soil samples at various depths were collected and submitted for laboratory analyses. A groundwater sample was collected from TW-02. FIGURE No. 3 provides site details and soil boring locations.

3.3 SOIL SAMPLING (Dodson Road and Eastex Freeway)

Six (6) soil borings, SB-05, TW-03, SB-06, SB-07, TW-04, and SB-08, were advanced in Dodson Street and the feeder road area of Eastex Freeway, south of Laura Koppe Road. The soil borings were completed near the LPST site located at 3616 Laura Koppe Road. PID readings ranged non-detect (0.0 ppm) to 3.5 ppm. One soil sample was collected from each location and sent to the lab for analysis. Groundwater samples were collected from TW-03 and TW-04 and sent to the lab for analysis. FIGURE No. 4 provides site details and soil boring locations.

3.4 SOIL SAMPLING (7702 Eastex Freeway)

Three (3) soil borings, TW-05, SB-09, and SB-10, were advanced in the feeder road area of Eastex Freeway, north of East Crosstimbers Street. The soil borings were completed near the LPST site located at 7702 Eastex Freeway. PID readings ranged non-detect (0.0 ppm) to 1,123 ppm in the soil collected from TW-05 location. One soil sample was collected from each location and sent to the lab for analysis. A groundwater sample was collected from TW-05 and sent to the lab for analysis. FIGURE No. 5 provides site details and soil boring locations.

3.5 SOIL SAMPLING (4902 Laura Koppe)

Three (3) soil borings, SB-11, TW-06, and SB-12, were advanced in Clarington Street, south of Laura Koppe. The soil borings were completed near the LPST site located at 4902 Laura Koppe Road. PID readings were non-detect (0.0 ppm) for the soil borings. Soil samples were collected and submitted for laboratory analyses from each location. A groundwater sample was collected from TW-06 and sent to the lab for analysis. FIGURE No. 6 provides site details and soil boring locations.

3.6 SOIL SAMPLING (Homestead Road)

Three (3) soil borings, SB-13, SB-14, and SB-15, were advanced in Parker Road, west of Homestead Road. The soil borings were completed near the LPST sites located at 10101, 10102, 10030, and 10039 Homestead Road. It was also near a dry cleaner site located at 7140 Parker Road, Houston, TX. PID readings ranged from non-detect (0.0 ppm) to 104 ppm at SB-15. A groundwater sample was not collected from this area because groundwater was not encountered at 20 feet bgs at any of the locations. FIGURE No. 7 provides site details and soil boring locations.

4.0 REGULATORY FRAMEWORK

The Texas Commission on Environmental Quality (TCEQ) administers the Environmental Protection Agency (EPA) regulations and enforcement in Texas. It has additionally established its own standards for environmental compliance. The Texas Risk Reduction Program (TRRP) administered by TCEQ, as provided for in 30 TAC Chapter 350, addresses levels of regulated compounds and allowable levels of such contaminants to protect human health, safety, and the environment. The TCEQ TRRP applies to closures, corrective actions, and remediation efforts subject to the jurisdiction of the TCEQ. The TRRP, whether residential or commercial, contains provisions for Remedy Standard A (no physical controls required) or Remedy Standard B (physical controls required). Implementation of Remedy Standard A or Remedy Standard B is a tiered process, as described in general terms below:

- Tier 1 is a risk-based analysis to derive non site-specific protective concentration limits (PCLs) for complete or reasonably anticipated to be complete exposure pathways. Tier 1 is based on default exposure factors and affected property parameters, and assumes exposure occurs at, above, or below the source area (i.e., no lateral transport) (TCEQ Subchapter D Section 350.75 (b)).
- Tier 2 is a risk-based analysis to derive site-specific PCLs for complete or reasonably anticipated to be completed exposure pathways utilizing site-specific exposure factors, as allowable, and/or affected property parameters and Tier 1 equations. Tier 2 PCLs may also include lateral transport considerations (TCEQ, Subchapter D Section 350.75 (c)).

- Tier 3 is a risk-based analysis to derive site-specific PCLs for complete or reasonably anticipated to be completed exposure pathways. Tier 3 PCLs are based on measured natural attenuation factors and/or natural attenuation factor models/equations other than those provided for Tier 1 or 2; and may also include site-specific exposure factors, as allowable, and/or affected property parameters (TCEQ, Subchapter D Section 350.75 (d)).

The below provided soil PCLs are concentrations which are protective of human health and the environment:

* $^{GW}Soil_{Ing}$ * Groundwater Soil Ingestion ($^{GW}Soil_{Ing}$) is the groundwater protection standard for either residential or commercial use. Concentration in soil is assumed protective of groundwater considering cross-medial contamination of groundwater from contaminated soil. This is the critical PCL for special handling practices of the soil for the project.

* $^{Tot}Soil_{Comb}$ * The Total Soil Combined ($^{Tot}Soil_{Comb}$) PCLs are a combined exposure standard for residential use. The PCL considers cross-media contamination of human ingestion, inhalation and dermal pathways. This is the critical PCL for construction worker exposure concentrations.

The following details groundwater PCLs:

* $^{GW}GW_{Ing}$ * Groundwater Ingestion ($^{GW}GW_{Ing}$) is the groundwater protection standard for either residential or commercial use. The $^{GW}GW_{Ing}$ PCLs are the same as the Federal Drinking Water Standards Maximum Concentration Limits (MCLs). This will be utilized to determine whether the groundwater is acceptable for surface discharge.

VOCs or MTBE/BTEX, and Total Petroleum Hydrocarbon (TPH) concentrations will be the environmental and exposure consideration of this project. The $^{Tot}Soil_{Comb}$, $^{GW}Soil_{Ing}$ and $^{GW}GW_{Ing}$ PCLs are the action levels for this project.

5.0 SOIL LABORATORY ANALYTICAL RESULTS

A total of twenty-one (21) soil samples and six (6) groundwater samples were collected from the twenty-one (21) soil borings. Soil samples were submitted to A&B Laboratory for analyses. Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) or methyl tert-butyl ether/benzene, toluene, ethyl-benzene and total xylenes (MTBE/BTEX) by EPA Method SW846-8021B. Select soils samples were also analyzed for total petroleum hydrocarbons (TPH) by Texas Commission on Environmental Quality (TCEQ) Texas Method 1005. The following details the laboratory methodology:

5.1 LABORATORY ANALYTICAL METHODS

Volatile Organic Compounds (VOCs) or Methyl tert-butyl ether/benzene, toluene, ethyl-benzene, and xylene (MTBE/BTEX) by SW-846 EPA Method 8021B: This laboratory analysis employs a gas chromatograph (GC) equipped with a photoionization detector and/or electrolytic conductivity detectors to detect and quantify certain regulated, volatile organic compounds in a soil or water sample. Compounds on this list include certain chlorinated solvents used in dry cleaning and printing processes, refined petroleum products such as gasoline and diesel, and others. This method can also be used to test for MTBE/BTEX compounds, which are a portion of the entire VOA list. These compounds are common components of most formulated gasolines, and their presence is a reliable indicator that a gasoline release has occurred.

Total Petroleum Hydrocarbons (TPH) by TCEQ Method 1005: This laboratory analysis utilizes a GC equipped with a flame ionization detector (FID) to quantify levels of petroleum compounds or derivatives in the range from C6 to C28, in a soil or groundwater medium. Results are reported in two (2) to three (3) distinct ranges, from C6 to C12, C12 to C28 and C28 to C35. This allows some interpretation as to the possible source of the release, based upon the indicated carbon range. Petroleum hydrocarbons are not necessarily hazardous or toxic. The analysis is designed to determine if TPH is present, and to quantify the level of petroleum hydrocarbons. This analysis is especially useful as a broad category procedure, and may indicate additional testing for the specific hazardous or toxic constituents that may be present and contribute to the TPH levels assessed. Some constituents of petroleum hydrocarbons may be hazardous or toxic, high levels of TPH require additional testing of the sample area.

5.2 SOIL AND GROUNDWATER LABORATORY ANALYTICAL RESULTS

One (1) soil sample was collected from the following locations and were submitted for MTBE/BTEX and TPH analyses as follows:

SB-01, SB-02, TW-01, SB-03, SB-04, TW-02, SB-05, SB-06, TW-03, SB-07, SB-08, TW-04, SB-09, SB-10, TW-05, SB-11, SB-12, and TW-06

Additionally, three (3) soil sample were collected from SB-13, SB-14, and SB-15 and submitted for VOC analysis.

A groundwater sample was collected from each of the following locations and submitted for MTBE/BTEX and TPH analysis:

TW-01, TW-02, TW-03, TW-04, TW-05 and TW-06

5.2.1 LAB ANALYTICAL RESULTS (Jensen Drive)

Three (3) soil samples, SB-01 at 5-6 feet bgs, SB-02 at 9 feet bgs and TW-01 at 8-9 feet bgs, were submitted and analyzed for this location. Additionally, a groundwater sample was collected from TW-01 and analyzed by the laboratory. The following was reported for individual COC constituents for the soil and groundwater samples:

- Based on the laboratory analytical results, MTBE/BTEX and TPH in soil and groundwater were determined to be non-detect.

Individual COC constituents were determined to be less than or below the sample detection limit at this location. None of the soil laboratory analytical concentrations exceed the TCEQ $^{Tot}Soil_{Comb}$ and/or are not a health concern to construction workers. Additionally, the soil laboratory analytical results are below PCLs and do not require special handling practices. Groundwater laboratory results were determined to be below TCEQ PCLs. No detections were encountered that would require special pipe and gasket. A copy of the laboratory analytical results is presented in APPENDIX B.

5.2.2 LAB ANALYTICAL RESULTS (Friendly Street)

Three (3) soil samples, SB-03 at 2-3 feet bgs, SB-04 at 3-4 feet bgs, and TW-02 at 3-4 feet bgs, were submitted and analyzed for this location. Additionally, a groundwater sample was collected from TW-02 and analyzed by the laboratory. The following was reported for individual COC constituents for the soil and groundwater samples:

- Based on the laboratory analytical results, MTBE/BTEX and TPH in soil and groundwater were determined to be non-detect.

Individual COC constituents were determined to be less than or below the sample detection limit at this location. None of the soil laboratory analytical concentrations exceed the TCEQ $^{Tot}Soil_{Comb}$ and/or are not a health concern to construction workers. Additionally, the soil laboratory analytical results are below $^{GW}Soil_{Ing}$ PCLs and do not require special handling practices. Groundwater laboratory results were determined to be below TCEQ PCLs. No detections were encountered that would require special pipe and gasket.

5.2.3 LAB ANALYTICAL RESULTS (Dodson Road and Eastex Freeway)

Six (6) soil samples, SB-06 at 3-4 feet bgs, SB-05 at 8 feet bgs, TW-03 at 3-4 feet bgs, SB-07 at 8 feet bgs, TW-04 at 9 feet bgs, and SB-08 at 5-6 feet bgs were submitted and analyzed for this location. Additionally, a groundwater sample was collected from TW-03 and TW-04 and analyzed by the laboratory. The following was reported for individual COC constituents for the soil and groundwater samples:

- Based on the laboratory analytical results, MTBE/BTEX and TPH in soil and groundwater were determined to be non-detect.

Individual COC constituents were determined to be less than or below the sample detection limit at this location. None of the soil laboratory analytical concentrations exceed the TCEQ $^{Tot}Soil_{Comb}$ and/or are not a health concern to construction workers. Additionally, the soil laboratory analytical results are below $^{GW}Soil_{Ing}$ PCLs and do not require special handling practices. Groundwater laboratory results were determined to be below TCEQ PCLs. No detections were encountered that would require special pipe and gasket.

5.2.4 LAB ANALYTICAL RESULTS (7702 Eastex Freeway)

Three (3) soil samples, TW-05 at 10 feet bgs, SB-09 at 5 feet bgs and SB-10 at 5 feet bgs, were submitted and analyzed for this location. The following was reported for individual MTBE/BTEX constituents for the soil samples:

- MTBE concentrations were determined to be below the sample detection limit.
- Benzene concentrations were determined to be below the sample detection limit.
- Toluene concentrations were determined to be below the sample detection limit.
- Ethyl-benzene concentrations were determined to range from below the sample detection limit to 0.086 mg/kg in TW-05. This detection is below the TRRP Tier 1 PCL.
- Total xylene concentrations were determined to range from below the sample detection limit to 0.027 mg/kg in TW-05. This detection is below the TRRP Tier 1 PCL.

The following was reported for individual MTBE/BTEX constituents for the groundwater sample:

- MTBE concentrations were determined to be below the sample detection limit.
- Benzene concentrations were determined to be 0.0045 mg/L in TW-05. This detection is below the TRRP Tier 1 PCL.
- Toluene concentrations were to determined to be 0.0025 mg/L in TW-05. This detection is below the TRRP Tier 1 PCL.
- Ethyl-benzene concentrations were determined to be 0.401 mg/L in TW-05. This detection is below the TRRP Tier 1 PCL.
- Total xylene concentrations were determined be 0.241 mg/L in TW-05. This detection is below the TRRP Tier 1 PCL.

The following was reported for TPH constituents for the soil samples:

- Based on the laboratory analytical results, TPH analytes ranged from non-detect to 31.9 mg/kg of the C6 - C12 range in TW-05. This detection is below the TRRP Tier 1 PCL. Due to the detection, the area is a PPCA.

The following was reported for TPH constituents for the groundwater sample:

Å Based on the laboratory analytical results, the TPH concentration was determined to be 1.02 mg/L of the C6 - C12 range in TW-05.

Due to the PID readings and soil and groundwater analytical data, air monitoring is required at the southern extent of the 7702 Eastex Freeway REC location. Additionally, special groundwater handling practices will be required at this location and solvent resistant gaskets and piping will be required as well. The area is a PPCA.

5.2.5 LAB ANALYTICAL RESULTS (4902 Laura Koppe)

Three (3) soil samples, SB-11 at 5 feet bgs, SB-12 at 6 feet bgs and TW-06 at 8 feet bgs, were submitted and analyzed for this location. Additionally, a groundwater sample was collected from TW-06 and analyzed by the laboratory. The following was reported for individual COC constituents for the soil and groundwater samples:

- Based on the laboratory analytical results, MTBE/BTEX and TPH in soil were determined to be non-detect.

- The groundwater sample collected from TW-06 was determined to have ethyl-benzene concentration of 0.0026 mg/L. This concentration is below the TRRP Tier 1 PCL. All other groundwater analytes existed in concentrations below the detection limits.

Individual COC constituents were determined to be less than or below the sample detection limit at this location. None of the soil and groundwater laboratory analytical concentrations exceed the TCEQ $^{Tot}Soil_{Comb}$ and/or are not a health concern to construction workers. Additionally, the soil laboratory analytical results are below $^{GW}Soil_{Ing}$ PCLs and do not require special handling practices. However, based on the groundwater detection, the area is a PPCA for groundwater only. Groundwater cannot be discharged without special practices.

5.2.6 LAB ANALYTICAL RESULTS (Homestead Road)

Three (3) soil samples, SB-13 at 4 feet bgs, SB-14 at 11 feet bgs and SB-15 at 6-7 feet bgs, were submitted and analyzed for VOCs at this location due to the vicinity of a dry cleaning facility. A groundwater sample was not submitted because groundwater was not encountered during drilling activities. The following was reported for individual VOC constituents for the soil samples:

- All analytes were determined to be under the detection limits except for methylene chloride and n-Propylbenzene in SB-15. The concentrations of those two (2) compounds were determined to be 0.0072 and 0.011 mg/kg, respectively. Both detections are below the TRRP Tier 1 PCLs.

The majority of VOC constituents were determined to be less than or below the sample detection limit at this location. None of the soil laboratory analytical concentrations exceed the TCEQ $^{Tot}Soil_{Comb}$ and/or are not a health concern to construction workers. The soil will require special handling practices and is a PPCA. Also, because of the relatively high PID readings observed during drilling activities, air monitoring should take place at this location during construction activities.

6.0 AIR MONITORING/WASTE MANAGEMENT PRACTICES

Based on the results of the Phase II ESA, air monitoring is warranted at two (2) REC locations (7702 Eastex Freeway and Homestead Road). Confined space protocol also still applies at other project alignment area depending on construction activities. With the exception of the vicinity of soil boring TW-05 (7702 Eastex Freeway) and SB-15 (Homestead Road), no ñ*special handling practices*ò of the soil is required. The areas are PPCA.

Special handling practices of groundwater will be required in the vicinity of soil boring TW-05 and TW-06 (Laura Koppe). The area has been designated a potentially contaminated area (PPCA). FIGURE Nos. 5 and 6 delineates the PPCA.

7.0 CONCLUSIONS

The purpose of the assessment was to determine the absence or presence and concentration levels of petroleum hydrocarbons in soil and groundwater at select REC locations. Phase II ESA activities were conducted in accordance with ATL, Inc.'s proposal/workplan dated December 16th, 2014. Phase II ESA activities were also conducted in accordance with the ASTM 1903 Standard Practice and the City of Houston criteria. The following was indicated by the laboratory analytical results:

Soil Laboratory Analytical Results

VOCs and petroleum hydrocarbons were reported to be below the laboratory sample detection limit or non-detect at the majority of the REC locations.

With the exception of soil samples collected from TW-05 and SB-15, individual MTBE/BTEX and TPH constituents were below laboratory sample detection limits. The soil laboratory results are below TCEQ TRRP Total Soil Combined ($^{Tot}Soil_{Comb}$) Groundwater Soil Protective ($^{GW}Soil_{Ing}$) PCLs Protective Concentration Levels (PCLs) for a 0.5-acre residential use and are not a concern to construction workers. However, due the detections, the areas are designated PPCA.

Groundwater Laboratory Analytical Results

With the exception of groundwater collected from sample TW-05 and TW-06, the remaining groundwater samples were reported to be below the laboratory sample detection limit. Due the detections, the areas are designated PPCA.

8.0 RECOMMENDATIONS

Based on the laboratory analytical results and field observations of the Limited Phase II Environmental Site Assessment for the Water Line Replacement in the Dodson Area in Harris County, Texas, the following is noted:

Soil conditions are not a concern to construction workers. Based on the PID readings, air monitoring is required at the southern extent of the 7702 Eastex Freeway REC location and at the western extent of the work being performed in Parker Road. Based on the Phase II ESA results, additional environmental investigation work is not warranted. Additionally, the following is noted for the REC locations:

7702 Eastex Freeway

- Due to the minor soil laboratory analytical detections in soil boring TW-05, the area is a PPCA.
- Additionally, a TPH (C6-C12) detection of 0.102 mg/L was reported in the laboratory analytical results from groundwater sample from boring TW-05. The TPH concentration exceeds the TCEQ TRRP

Groundwater ($^{GW}GW_{Ing}$) PCLs of 0.98 mg/L for TPH. Due to this laboratory analytical detection, the area shall be defined as a PPCA. Special soil and groundwater handling practices will be required at the REC location. Groundwater shall be contained, sampled, discharged, or disposed as appropriate using applicable permits. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

The Station Nos. are from 4+50 to 5+25 (Eastex Fwy. frontage).

Clarington Street

- An ethyl-benzene concentration of 0.0026 mg/L was reported in the laboratory analytical results from groundwater sample from boring TW-06. Due to this laboratory analytical detection, the area shall be defined as a PPCA. Special groundwater handling practices will be required at the REC location. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

  The Station Nos. are from 10+00 to 11+00 (Clarington Road).

Parker Road

- Due to the minor soil laboratory analytical detections in soil boring SB-15, the area is a PPCA. Low level detections of methylene chloride (0.0072 mg/L) and n-Propylbenzene (0.011 mg/kg) were reported in SB-15. Solvent resistant piping and gaskets are required at this location. The station numbers are as follows:

  The Station Nos. are from 11+00 to 12+00 (Parker Road).

FIGURES

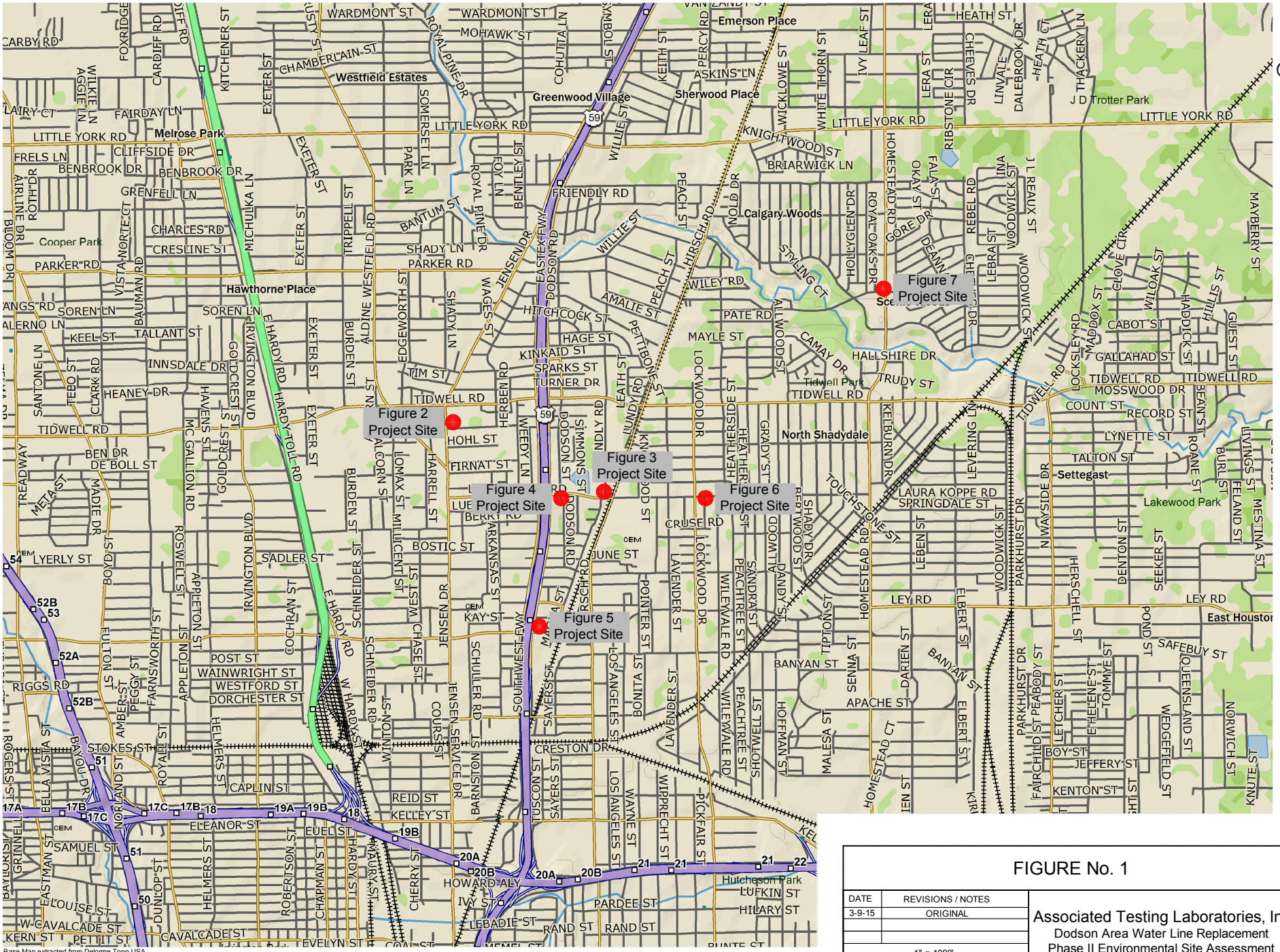


FIGURE No. 1

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 4000'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment

Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

SOIL BORING with TEMP WELL LOCATION

FIGURE No. 2

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 50'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment

Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

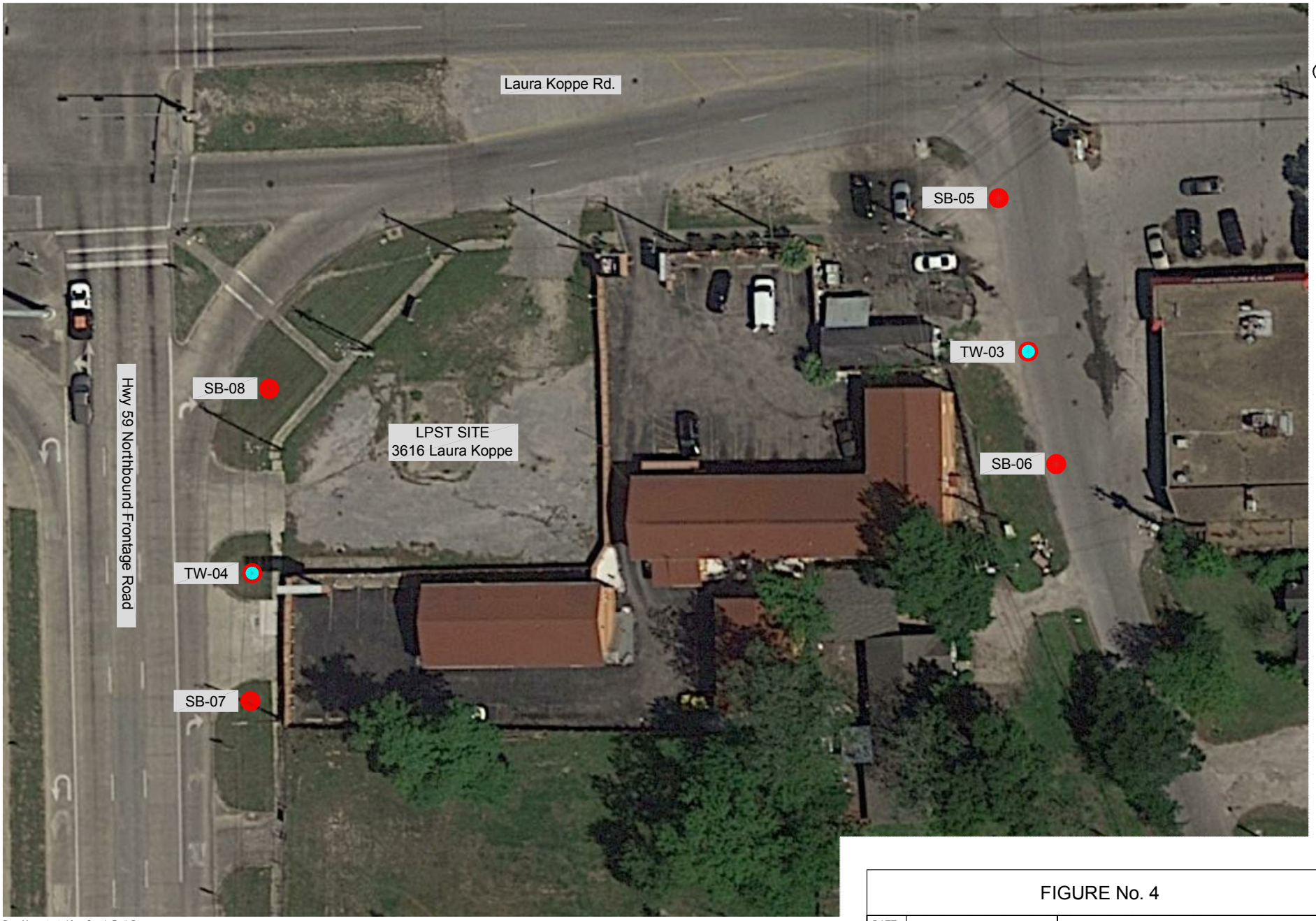
SOIL BORING with TEMP WELL LOCATION

FIGURE No. 3

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 50'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment



Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

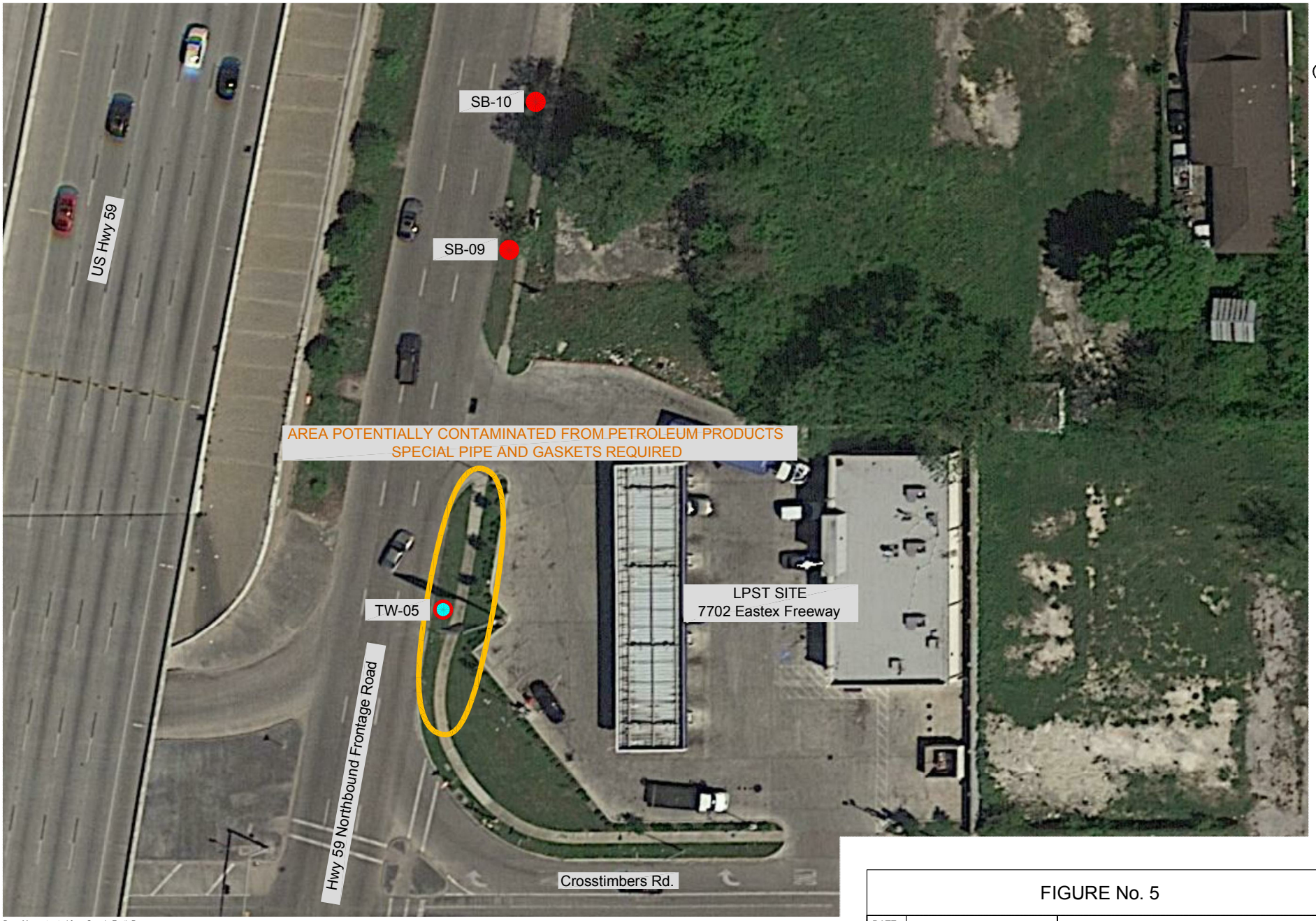
SOIL BORING with TEMP WELL LOCATION

FIGURE No. 4

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 50'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment



Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

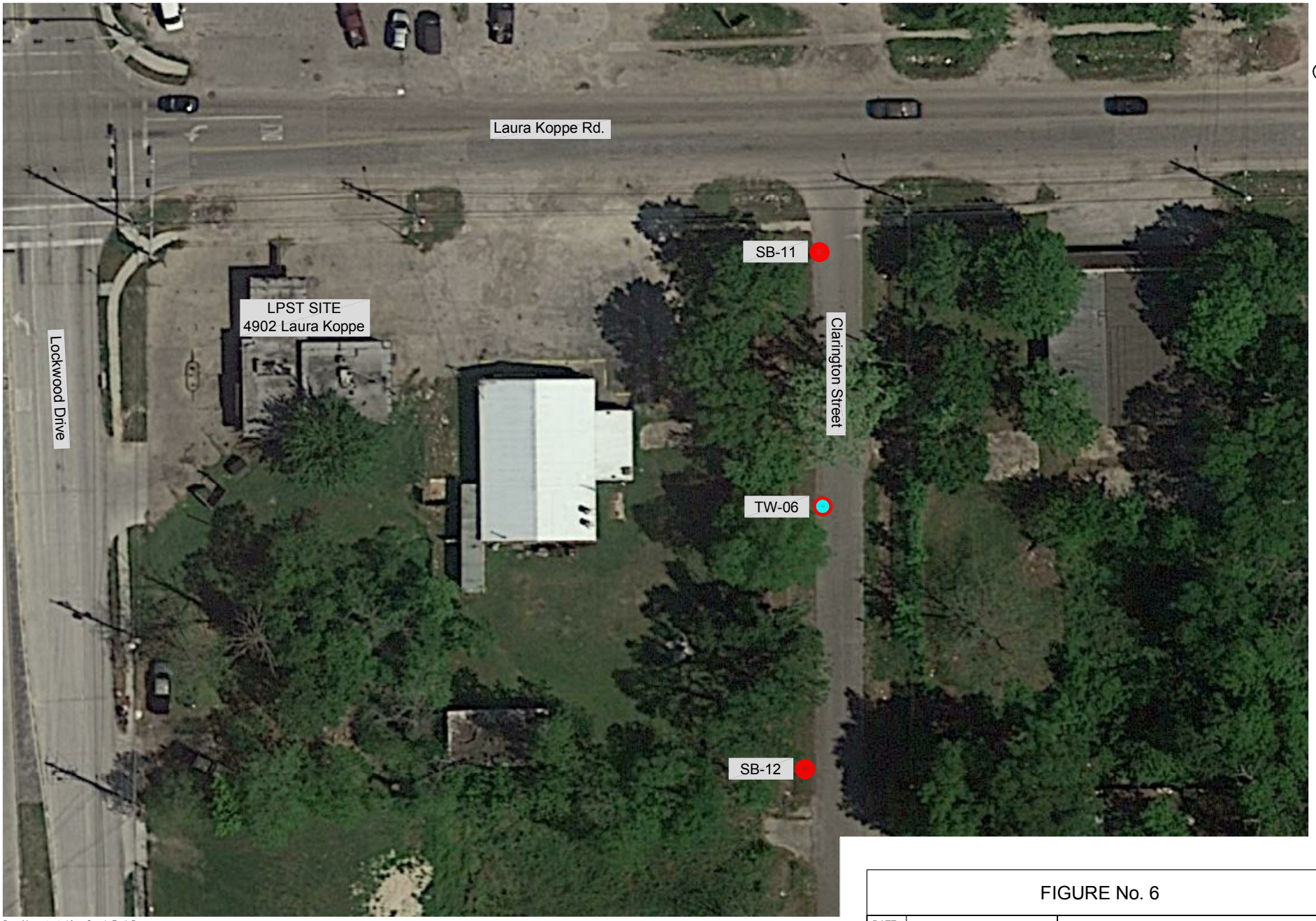
SOIL BORING with TEMP WELL LOCATION

FIGURE No. 5

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 50'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment



Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

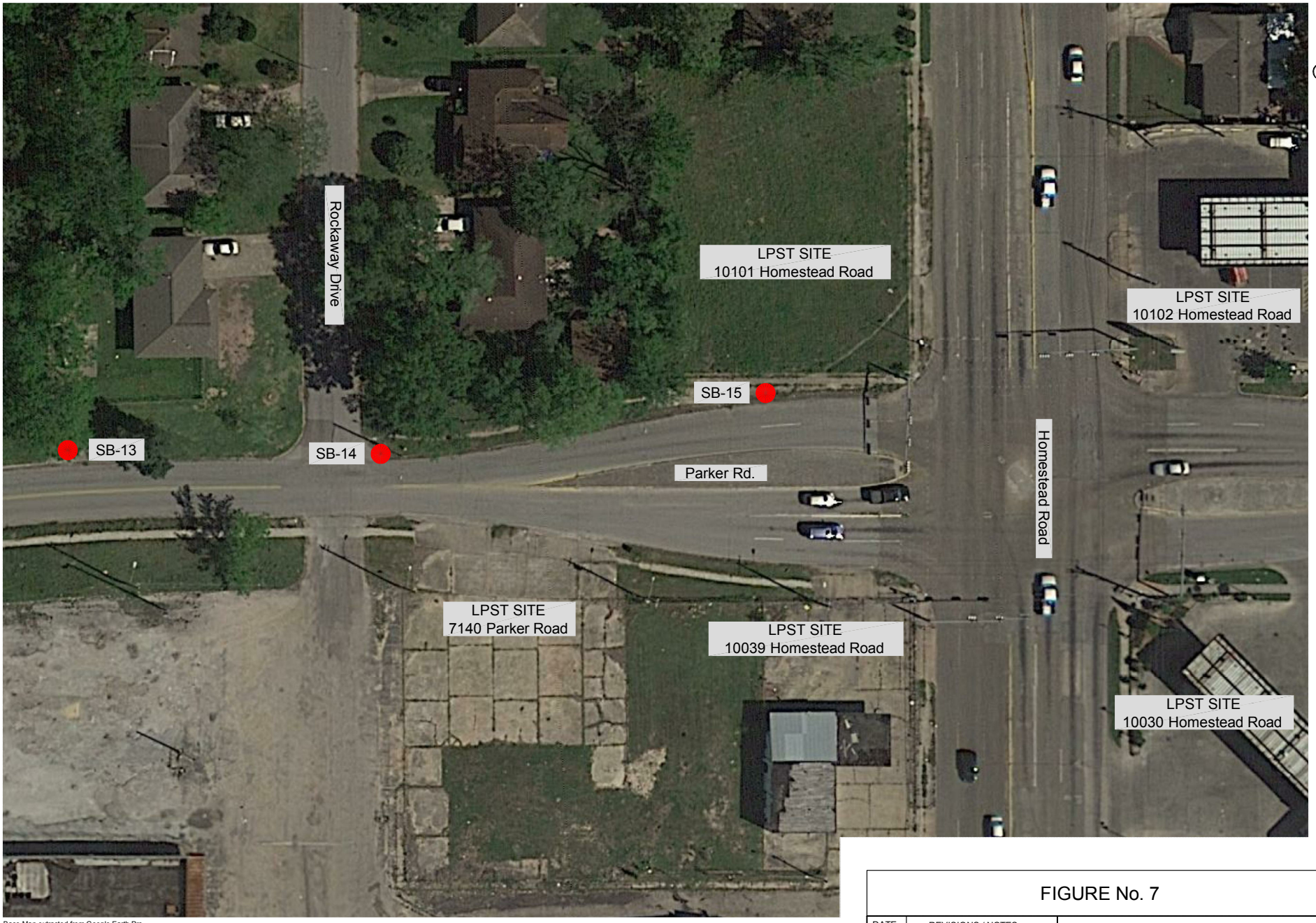
SOIL BORING with TEMP WELL LOCATION

FIGURE No. 6

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 50'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment



Base Map extracted from Google Earth Pro.

SOIL BORING LOCATION

NOTE: Groundwater was not found or sampled.

FIGURE No. 7

DATE	REVISIONS / NOTES
3-9-15	ORIGINAL

1" = 60'

Associated Testing Laboratories, Inc
Dodson Area Water Line Replacement
Phase II Environmental Site Assessment

APPENDIX A

Soil Boring Logs

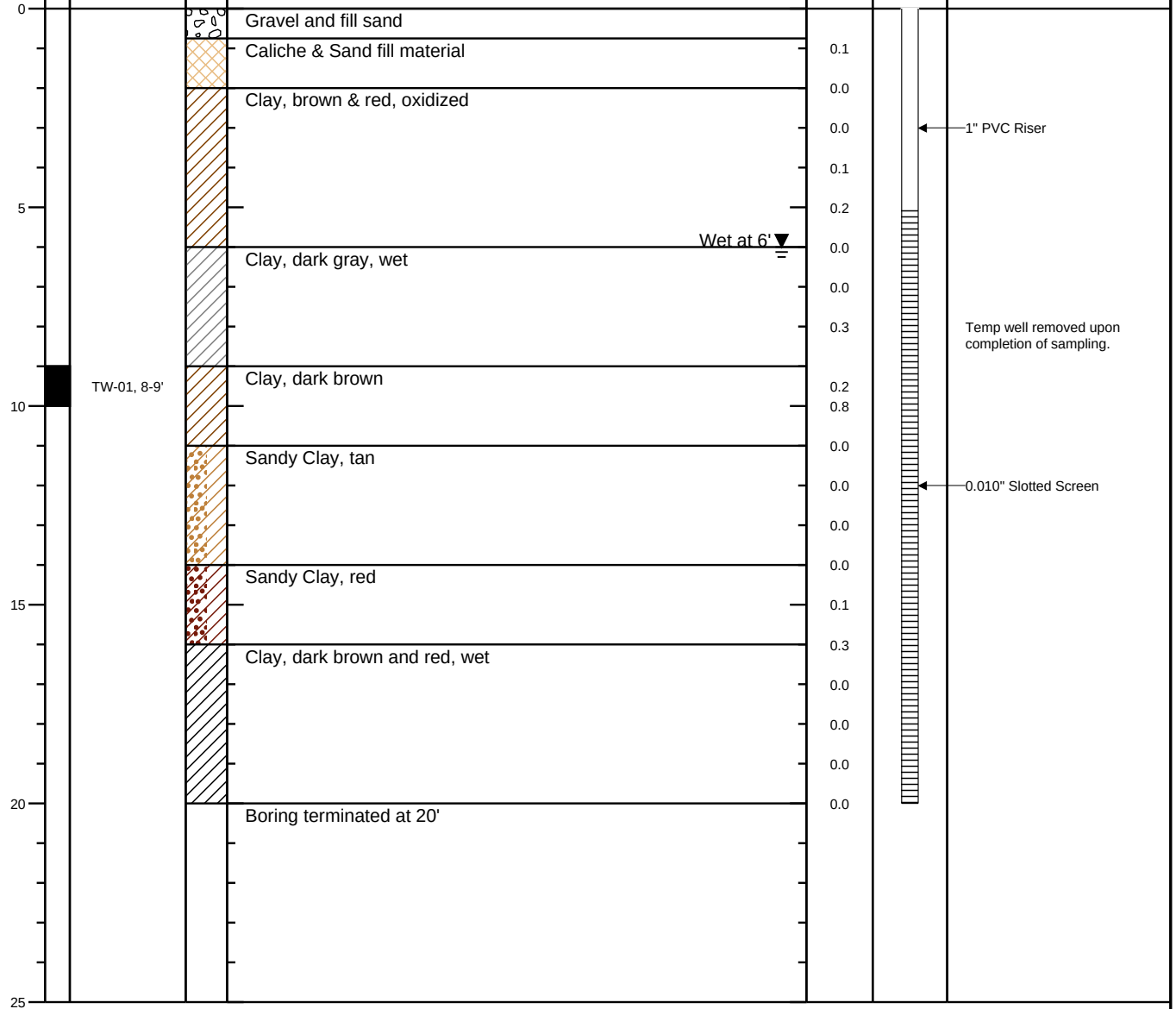
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-01 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **West end of Hurley St, at Jensen Dr.**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Concrete			
				Caliche & Sand fill material	0.8		
				Clay, brown with oxidated mottles at 4'	0.4		
					0.5		
					0.6		
5		SB-01, 5-6'		Wet at 6' ▼	0.9		
				Clay, dark gray, wet	0.10		
					0.2		
					0.2		
				Clay, dark brown	0.3		
10					0.4		
				Sandy Clay, tan	0.4		
					0.3		
					0.2		
				Sandy Clay with red limestone	0.2		
15					0.2		
				Clay, dark brown and red, wet	0.3		
					0.3		
					0.3		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-01 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **West end of Hurley St, near Jensen Dr.**	



Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-02 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **West end of Hurley St, at Jensen Dr.**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Gravel and sand fill	0.0		
				Clay, brown	0.0		
					0.0		
					0.0		
5					0.0		
				Wet at 6' ▼	0.0		
				Clay, dark gray, moist	0.0		
					0.0		
		SB-02, 9'		Clay, black	0.3		
10					0.0		
				Clay, white limestone, hard	0.0		
					0.0		
					0.0		
				Clay, red, moist	0.0		
15					0.0		
				Clay, dark brown and red, wet	0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

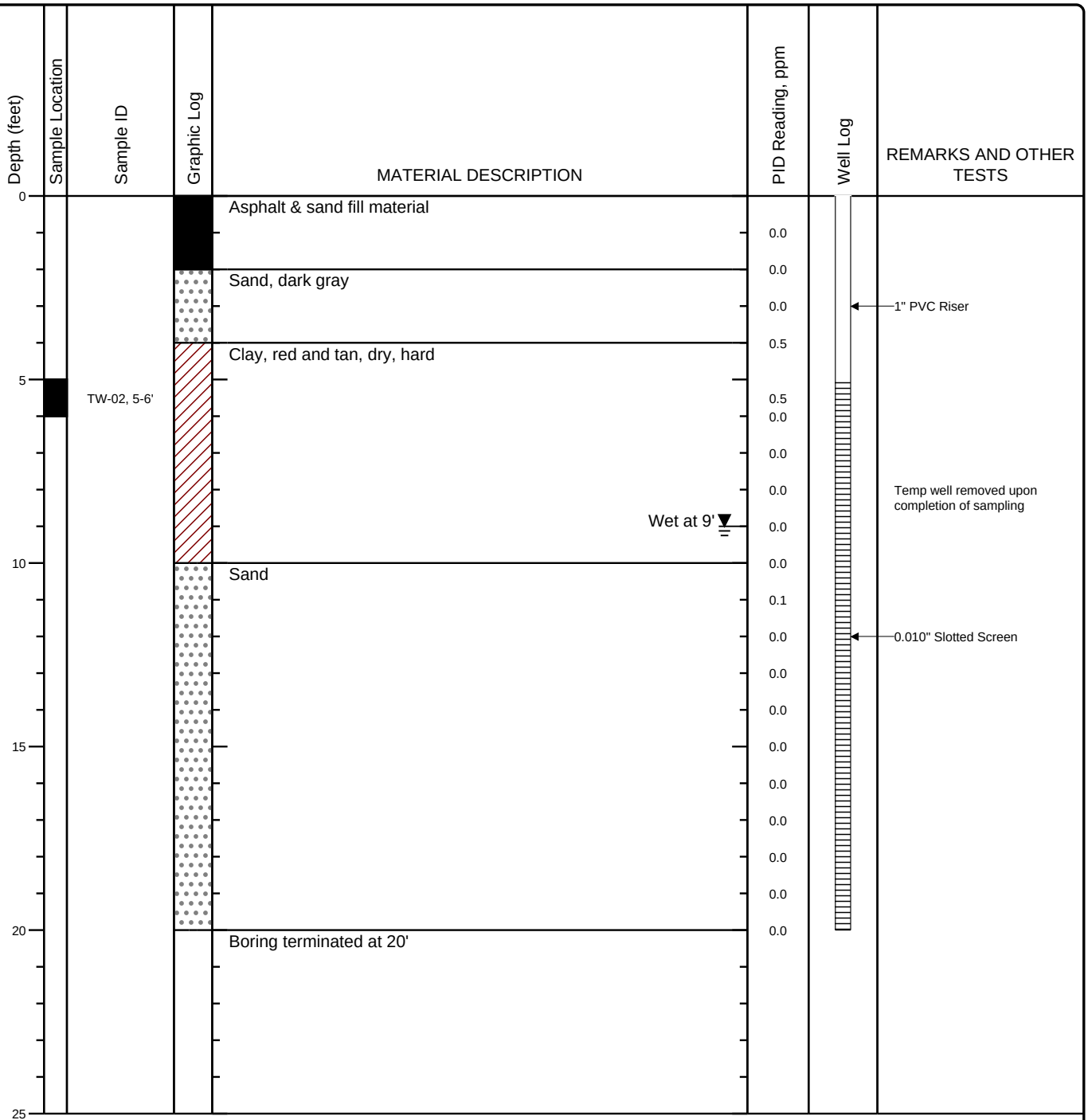
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-03 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Friendly Road at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt			
				Sand, dark gray	0.6		
		SB-03, 2-3'			0.3		
					2.0		
					0.3		
5				Clay, dark gray, dry	0.0		
				Sandy Clay, red and green	0.0		
					0.0		
					0.2		
				Sand, gray, moist	0.1		
10					0.0		
					0.0		
				Wet at 12' ▼	0.0		
					0.0		
					0.0		
15					0.0		
					0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-02 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Friendly Road at Laura Koppe Road**	



Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-04 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Friendly Road at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt & sand fill material	0.0		
				Gravel	0.3		
				Sand, brown, moist	0.4		
		SB-04, 3-4'			0.0		
5					0.0		
				Clay, brown	0.0		
					0.0		
				No Recovery, 8-12'	0.0		
10					0.0		
					0.0		
				Clay, white	0.0		
				Clay, red and gray,moist	0.0		
15					0.0		
				Wet at 16' ▼	0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

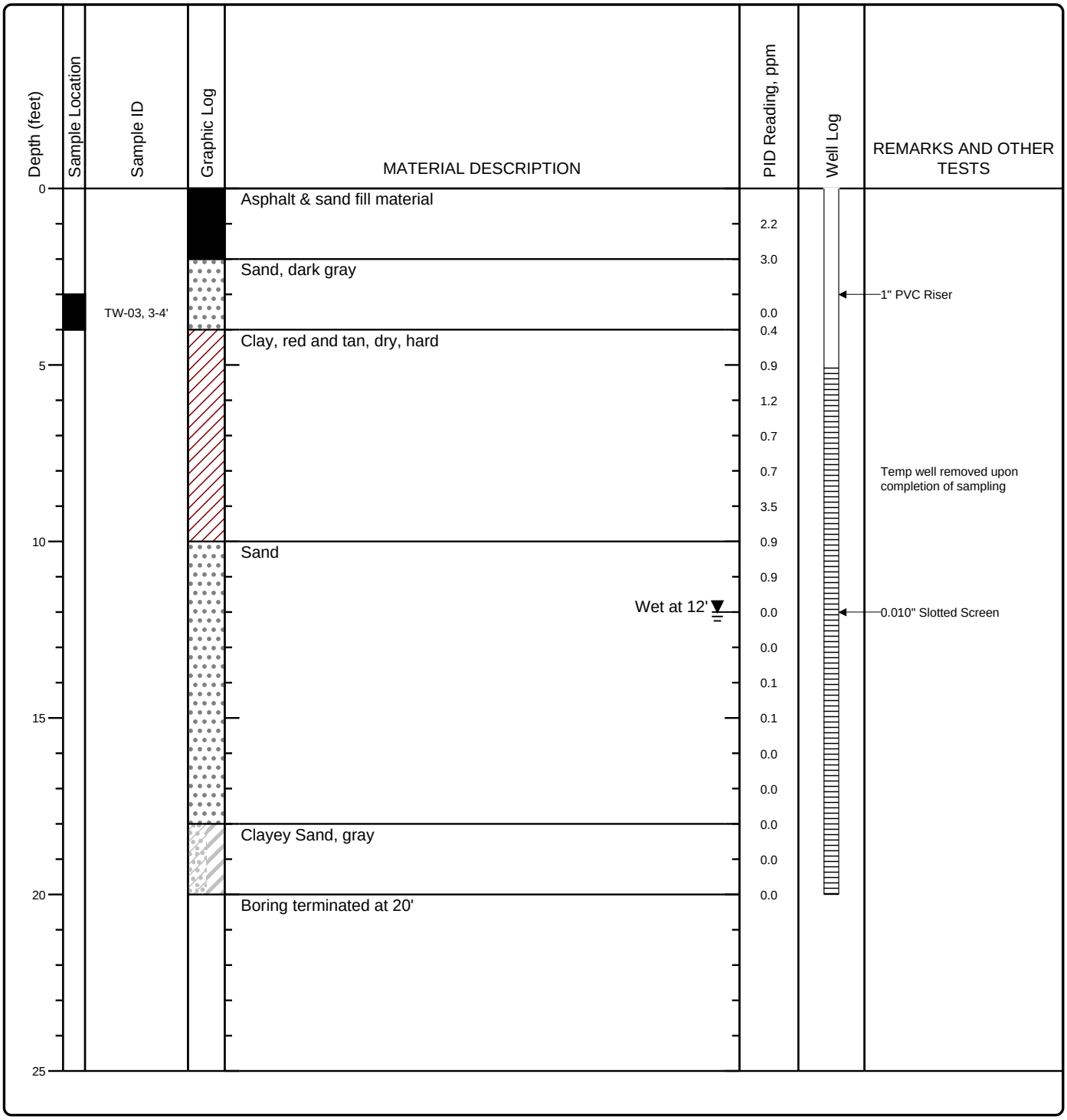
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-05 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Dodson Road at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sand and fill material	0.0		
					0.0		
				Sand, gray to tan	0.4		
					0.5		
5				Clay, gray with red and orange mottling, stiff	0.5		
					0.4		
					0.4		
		SB-05, 8'			0.5		
				Wet at 9' ▼			
				Sand, light gray, wet	0.3		
10					0.1		
					0.2		
					0.2		
				Sand, light gray medium to fine grain	0.0		
					0.0		
15					0.0		
					0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-03 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Dodson Road at Laura Koppe Road**	



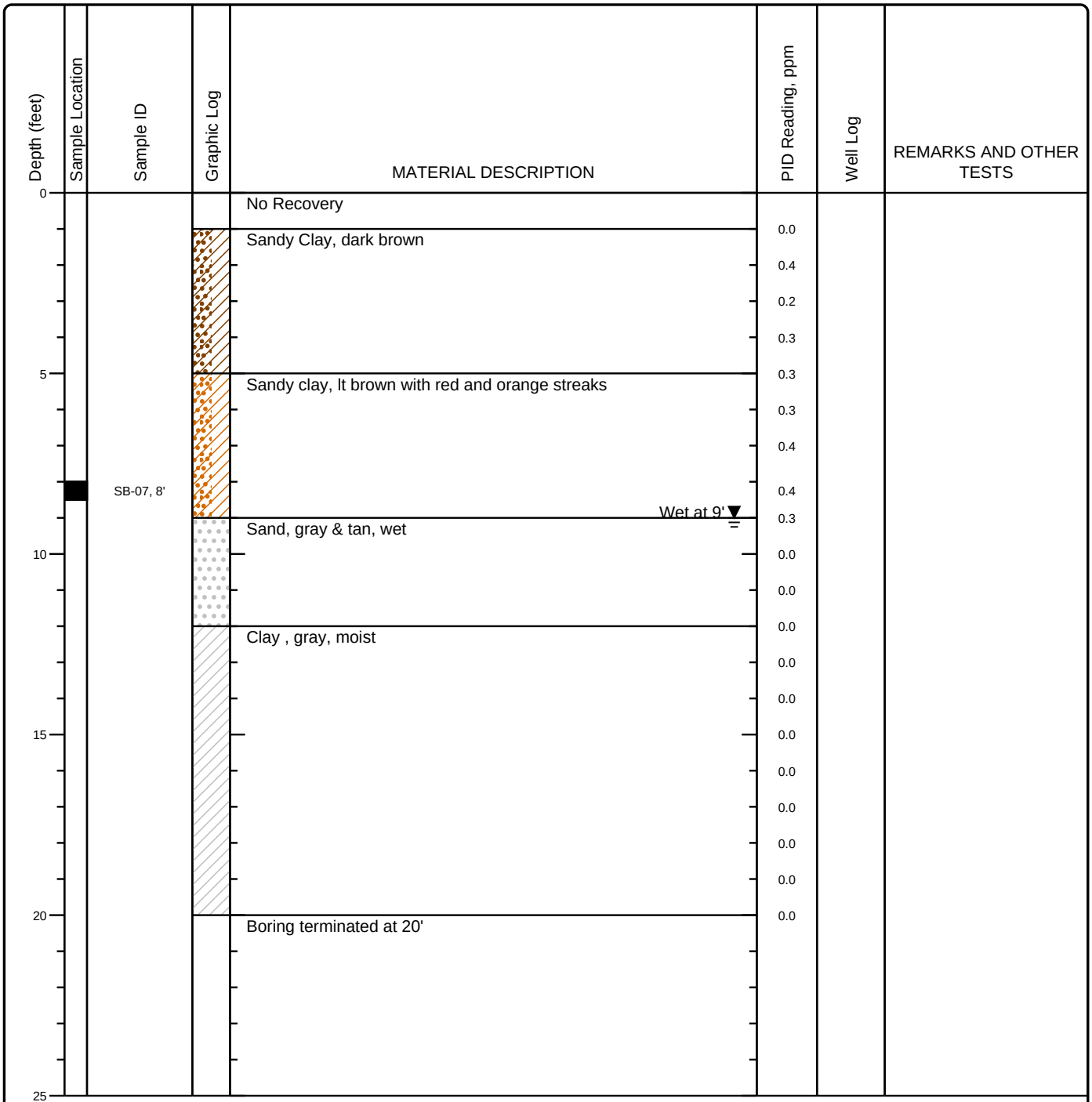
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-06 **Sheet 1 of 1**

Date(s) Drilled **2-18-15**	Logged By **CMM**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Dodson Road at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				Asphalt	0.0		
				Gravel and fill	0.0		
		SB-06, 3-4'		Sand, black	0.0		
					0.4		
5				Clay, red and brown	1.1		
					0.4		
					0.8		
					0.7		
				Wet at 9' ▼	0.0		
10				Sand, gray, wet	0.0		
					0.2		
					1.0		
				Sand, light gray medium to fine grain	0.0		
					0.0		
15					0.0		
					0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

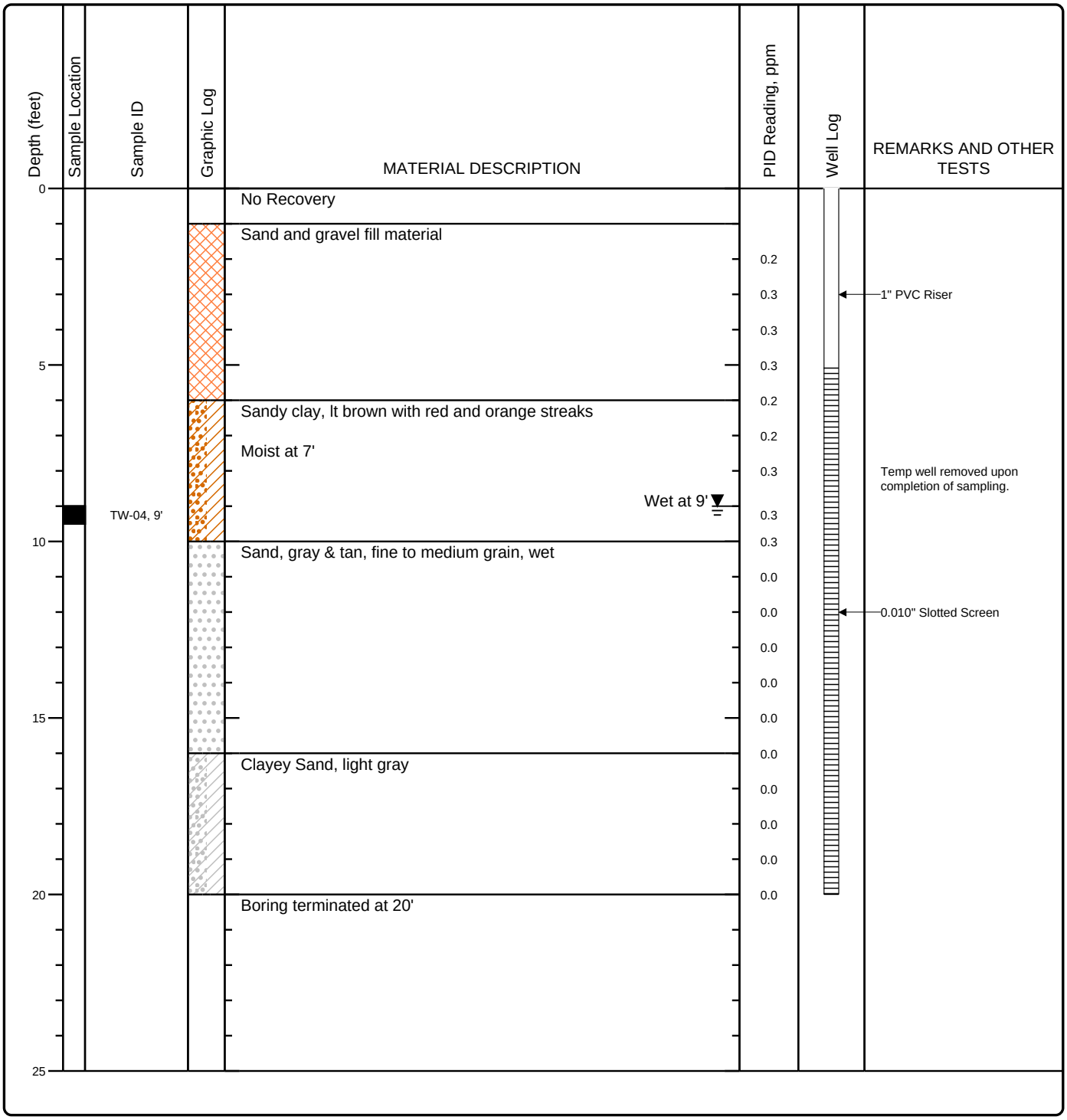
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-07 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Laura Koppe Road**	



Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-04 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Laura Koppe Road**	



Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-08 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sand and gravel fill material	0.3		
					0.3		
					0.3		
5					0.3		
		SB-08, 6'		Sandy clay, lt brown with red and orange streaks	0.3		
				Moist at 7'	0.3		
					0.3		
				Wet at 9' ▼	0.3		
10				Sand, gray & tan, wet	0.1		
					0.0		
					0.0		
					0.0		
					0.0		
15					0.0		
				Clayey Sand, light gray	0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-05 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Crosstimbers Rd.**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sandy Clay, light brown, slightly moist	0.4		1" PVC Riser
					0.6		
5				Sandy clay, light gray, damp	0.3		
					0.2		
					9.5		
					57.6		Temp well removed upon completion of sampling.
				Sand, gray & tan, fine to medium grain, wet	212.6		
10		TW-05, 10'		Clayey sand, red, damp	1123		
				Wet at 11' ▼	560		
				Clay, light gray and red	15.0		0.010" Slotted Screen
					37.0		
					21.8		
15					27.1		
				Clay, mostly red, gray streaks	26.0		
					12.7		
					0.0		
				Clay, gray, stiff	0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-09 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Crosstimbers Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sand and gravel fill material	0.1		
				Clayey Sand, light gray	0.1		
					0.2		
5		SB-09,5'		Clay, light gray, soft and moist	0.3		
					0.3		
					0.2		
					0.0		
				Wet at 9' ▼	0.1		
10				Sand, gray & tan, wet	0.1		
					0.0		
					0.0		
					0.0		
				Sandy Clay, light gray	0.0		
15					0.0		
					0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-10 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Northbound Hwy 59 feeder at Crosstimbers Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sand fill material	0.0		
				Clayey Sand, dark brown	0.0		
					0.0		
					0.0		
5				Clay, tan with orange streaks	0.0		
				Sandy Clay, slightly moist, light gray	0.0		
					0.0		
					0.0		
					0.0		
10		SB-10, 5'		Clayey Sand, light gray, damp	0.0		
				Wet at 11' ▼	0.0		
					0.0		
					0.0		
					0.0		
15				Clay, light gray with red streaks	0.0		
					0.0		
					0.0		
					0.0		
					0.0		
20				Clay, red and gray	0.0		
					0.0		
				Boring terminated at 20'			
25							

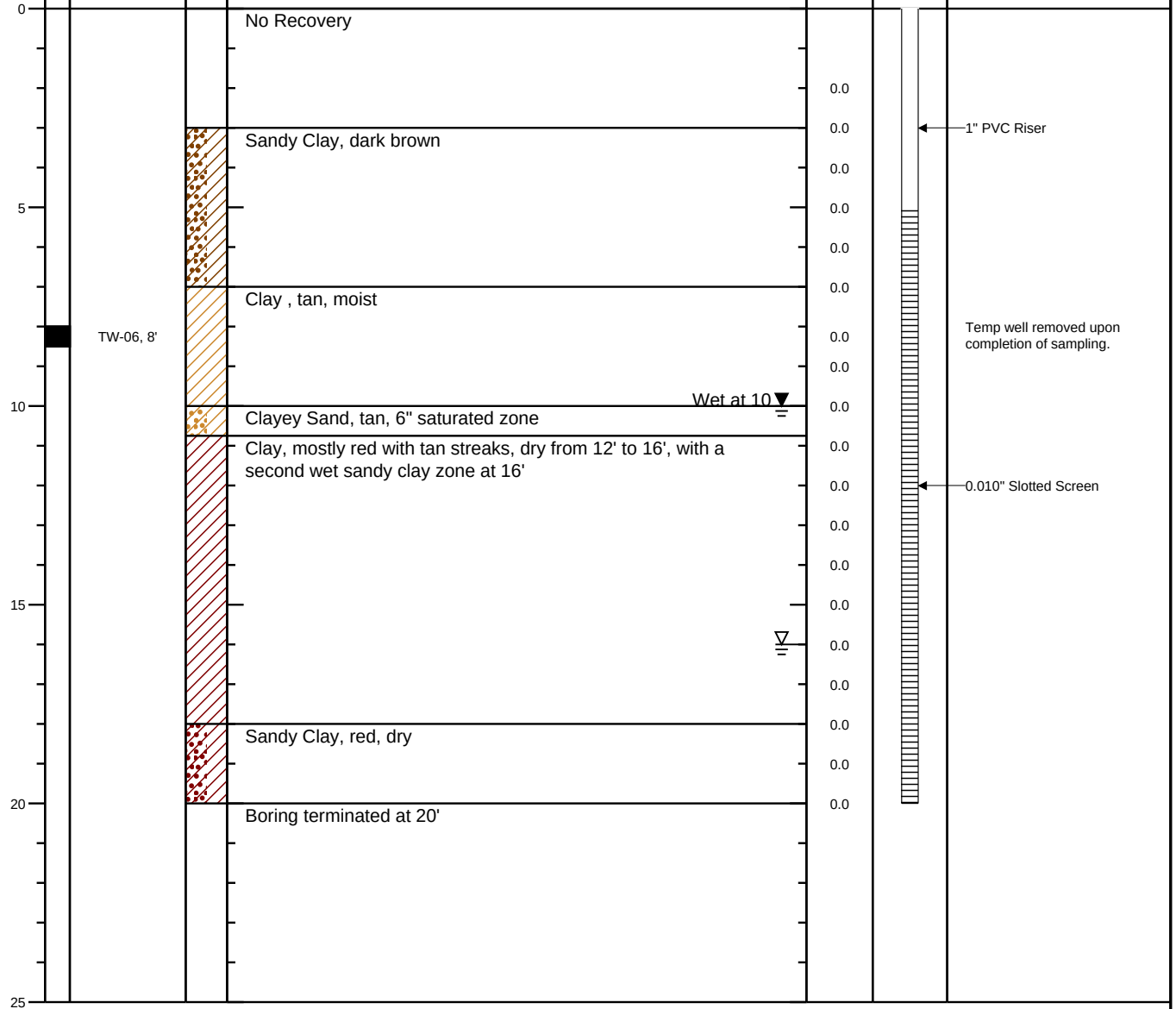
Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-11 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Clarington Street at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Clayey Sand, dark brown	0.0		
				Wet at 6'	0.0		
					0.0		
5		SB-11, 5'			0.0		
				Wet at 6' ▼	0.0		
					0.0		
				Clay, tan	0.0		
					0.0		
					0.0		
10					0.0		
					0.0		
					0.0		
					0.0		
				Clay, mostly red with gray streaks	0.0		
15					0.0		
					0.0		
					0.0		
					0.0		
				Clayey sand, red and gray	0.0		
				Narrow wet zone ▽	0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring TW-06 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Clarington Street at Laura Koppe Road**	



Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-12 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Clarington Street at Laura Koppe Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery to 4'			
5		SB-12, 6'		Clay, gray with red streaks Moist at 7'	0.0 0.0 0.0 0.0 0.0		
10				Clay, light gray, stiff Wet at 12' ▼	0.0 0.0 0.0 0.0 0.0		
15				Clayey Sand, gray, wet	0.0 0.0 0.0 0.0		
20				Clayey sand, red Boring terminated at 20'	0.0 0.0 0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-13 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Parker Road at Homestead Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Sandy Clay, light gray, dry	0.1		
					0.2		
		SB-13, 4'			0.3		
5					0.1		
				Clay, light gray, stiff	0.1		
					0.1		
				Clay, light gray with orange streaks	0.1		
					0.1		
10					0.1		
					0.0		
				Clay, gray with white nodules	0.1		
					0.1		
					0.0		
15					0.0		
					0.0		
					0.0		
				Clay, gray with red streaks	0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-14 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Parker Road at Homestead Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Clay, gray, hard and dry	0.1		
					0.1		
5					0.2		
					0.3		
					0.3		
					0.1		
					0.1		
10				Clay, gray with white nodules	0.2		
		SB-14, 11'			0.8		
				Clay, gray with tan and orange streaks, hard and dry	0.5		
					0.1		
					0.3		
15					0.3		
					0.0		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

Project: **PII for Water Line Replacement** Location: **Dodson Area of Houston** Project Number: **35-0205-3**	Log of Boring SB-15 **Sheet 1 of 1**

Date(s) Drilled **2-19-15**	Logged By **MJ**	Checked By **D Draybuck**
Drilling Method **Direct Push**	Drill Bit Size/Type **2"x4'**	Total Depth of Borehole **20'**
Drill Rig Type **Truck Mounted Geoprobe**	Drilling Contractor **Envirotech**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s)	Hammer Data
Borehole Backfill	Location **Parker Road at Homestead Road**	

Depth (feet)	Sample Location	Sample ID	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				No Recovery			
				Clay, gray, hard and dry	1.6		
					10.3		
5					10.2		
		SB-15, 6-7'			104		
				Clay with small white nodules	16.4		
					10.1		
					3.2		
10				Clay, gray with red streaks	3.6		
					0.8		
					1.2		
					3.4		
					3.1		
15					0.5		
				Clay, red, hard and dry	0.5		
					0.0		
					0.0		
					0.0		
20				Boring terminated at 20'	0.0		
25							

APPENDIX B

Laboratory Analytical Results

Laboratory Analysis Report

Total Number of Pages: 47

Job ID : 15020985

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
Water Line Replacement - Dodson Area

Report To :	Client Name:	Envirotech	P.O.#.:	
	Attn:	David Draybuck	Sample Collected By:	
	Client Address:	PO Box 19064	Date Collected:	02/18/15 - 02/19/15
	City, State, Zip:	Houston, Texas, 77224		

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
SB-01, 5'-6'	Soil	15020985.01
TW-01, 8'-9'	Soil	15020985.02
TW-01	Water	15020985.03
SB-02, 9'	Soil	15020985.04
SB-03, 2'-3'	Soil	15020985.05
TW-02, 3'-4'	Soil	15020985.06
TW-02	Water	15020985.07
SB-04, 3'-4'	Soil	15020985.08
SB-06, 3'-4'	Soil	15020985.09
TW-03, 3'-4'	Soil	15020985.10
TW-03	Water	15020985.11
SB-05, 8'	Soil	15020985.12
SB-07, 8'	Soil	15020985.13
TW-04, 9'	Soil	15020985.14
TW-04	Water	15020985.15
SB-08, 6'	Soil	15020985.16
TW-05, 10'	Soil	15020985.17
TW-05	Water	15020985.18
SB-09, 5'	Soil	15020985.19

Released By: Shantall Carpenter
Title: Senior Project Manager
Date: 3/2/2015

This Laboratory is NELAP (T104704213-14-12) accredited. Effective: 11/21/2014; Expires: 03/31/2015
Scope: Non-Potable Water, Drinking Water, Air, Solid, Biological Tissue, Hazardous Waste

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 Received : 02/20/2015 11:07

Laboratory Analysis Report

Total Number of Pages: 47

Job ID : 15020985

10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

A&B Labs has analyzed the following samples...

Client Sample ID	Matrix	A&B Sample ID
SB-10, 5'	Soil	15020985.20
SB-11, 5'	Soil	15020985.21
TW-06, 8'	Soil	15020985.22
TW-06	Water	15020985.23
SB-12, 6'	Soil	15020985.24
SB-13, 4'	Soil	15020985.25
SB-14, 11'	Soil	15020985.26
SB-15, 6'-7'	Soil	15020985.27

Released By: Shantall Carpenter

Title: Senior Project Manager

Date: 3/2/2015

This Laboratory is NELAP (T104704213-14-12) accredited. Effective: 11/21/2014; Expires: 03/31/2015

Scope: Non-Potable Water, Drinking Water, Air, Solid, Biological Tissue, Hazardous Waste

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 Received : 02/20/2015 11:07

LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 15020985 Date: 3/2/2015

General Term Definition

Back-Wt	Back Weight	Post-Wt	Post Weight
BRL	Below Reporting Limit	ppm	parts per million
cfu	colony-forming units	Pre-Wt	Previous Weight
Conc.	Concentration	Q	Qualifier
D.F.	Dilution Factor	RegLimit	Regulatory Limit
Front-Wt	Front Weight	RPD	Relative Percent Difference
LCS	Laboratory Check Standard	RptLimit	Reporting Limit
LCSD	Laboratory Check Standard Duplicate	SDL	Sample Detection Limit
MS	Matrix Spike	surr	Surrogate
MSD	Matrix Spike Duplicate	T	Time
MW	Molecular Weight	TNTC	Too numerous to count

Qualifier Definition

J	Estimation. Below calibration range but above MDL.
L1	Associated LCS and/or LCSD recovery is above acceptance limits for flagged analyte. Bias may be high.
Q18	Soils not collected in a hermetically sealed container may lose low-level VOCs.
Q9	Sample received in inappropriate container.
R3	MS/MSD RPD exceeds control limit. Recovery meets acceptance criteria."The sample randomly selcted as QC for this batch was not part of your project. Therefore, this sample matrix is not applicable to your project samples."
R4	LCS/LCSD RPD exceeds control limit. Recovery meets acceptance criteria.
S5	Target compounds caused elevation of baseline. Surrogate not calculated
V1	CCV recovery is above acceptance limits. This target analyte was not detected in the sample.
V7	CCV recovery is below the control limit for this analyte, however the average %difference for all the analytes meets method criteria.

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-01, 5'-6'
Date Collected: 02/18/15
Time Collected: 09:00
Other Information:

Job Sample ID: 15020985.01
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0049			02/23/15 16:34	SRB
	Benzene	BRL	mg/Kg	0.99	0.0049		Q18	02/23/15 16:34	SRB
	Toluene	BRL	mg/Kg	0.99	0.0049			02/23/15 16:34	SRB
	Ethylbenzene	BRL	mg/Kg	0.99	0.0049			02/23/15 16:34	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.99	0.0099			02/23/15 16:34	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0049			02/23/15 16:34	SRB
	Xylenes	BRL	mg/Kg	0.99	0.0148			02/23/15 16:34	SRB
	Trifluorotoluene(surr)	93.5	%	0.99	81-111			02/23/15 16:34	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 20:48	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 20:48	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 20:48	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 20:48	AVB
	1-Chlorooctane(surr)	119	%	1	60-143			02/24/15 20:48	AVB
	Chlorooctadecane(surr)	91.4	%	1	60-150			02/24/15 20:48	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-01, 8'-9'
Date Collected: 02/18/15
Time Collected: 09:45
Other Information:

Job Sample ID: 15020985.02
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 16:59	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/23/15 16:59	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 16:59	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 16:59	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 16:59	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 16:59	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0150			02/23/15 16:59	SRB
	Trifluorotoluene(surr)	91.5	%	1.00	81-111			02/23/15 16:59	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 21:11	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 21:11	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 21:11	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 21:11	AVB
	1-Chlorooctane(surr)	135	%	1	60-143			02/24/15 21:11	AVB
	Chlorooctadecane(surr)	100	%	1	60-150			02/24/15 21:11	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-01
Date Collected: 02/18/15
Time Collected: 10:35
Other Information:

Job Sample ID: 15020985.03
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 10:20	SRB
	Benzene	BRL	mg/L	1	0.002			02/21/15 10:20	SRB
	Toluene	BRL	mg/L	1	0.002			02/21/15 10:20	SRB
	Ethylbenzene	BRL	mg/L	1	0.002			02/21/15 10:20	SRB
	m- & p-Xylenes	BRL	mg/L	1	0.004			02/21/15 10:20	SRB
	o-Xylene	BRL	mg/L	1	0.002			02/21/15 10:20	SRB
	Xylenes	BRL	mg/L	1	0.006			02/21/15 10:20	SRB
	Trifluorotoluene(surr)	90	%	1	75-125			02/21/15 10:20	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.642	0.642		Q9	02/23/15 14:20	AVB
	>C12-C28[1]	BRL	mg/L	0.642	0.642			02/23/15 14:20	AVB
	>C28-C35[1]	BRL	mg/L	0.642	0.7062			02/23/15 14:20	AVB
	Total C6-C35	BRL	mg/L	0.642				02/23/15 14:20	AVB
	1-Chlorooctane(surr)	110	%	0.642	70-125			02/23/15 14:20	AVB
	Chlorooctadecane(surr)	121	%	0.642	70-125			02/23/15 14:20	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-02, 9'
Date Collected: 02/18/15
Time Collected: 10:55
Other Information:

Job Sample ID: 15020985.04
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0050			02/23/15 17:32	SRB
	Benzene	BRL	mg/Kg	0.99	0.0050		Q18	02/23/15 17:32	SRB
	Toluene	BRL	mg/Kg	0.99	0.0050			02/23/15 17:32	SRB
	Ethylbenzene	BRL	mg/Kg	0.99	0.0050			02/23/15 17:32	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.99	0.0099			02/23/15 17:32	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0050			02/23/15 17:32	SRB
	Xylenes	BRL	mg/Kg	0.99	0.0149			02/23/15 17:32	SRB
	Trifluorotoluene(surr)	95.5	%	0.99	81-111			02/23/15 17:32	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 21:35	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 21:35	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 21:35	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 21:35	AVB
	1-Chlorooctane(surr)	126	%	1	60-143			02/24/15 21:35	AVB
	Chlorooctadecane(surr)	97.2	%	1	60-150			02/24/15 21:35	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-03, 2'-3'
Date Collected: 02/18/15
Time Collected: 13:00
Other Information:

Job Sample ID: 15020985.05
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 17:57	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/23/15 17:57	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 17:57	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 17:57	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 17:57	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 17:57	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0149			02/23/15 17:57	SRB
	Trifluorotoluene(surr)	90.5	%	1.00	81-111			02/23/15 17:57	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 21:58	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 21:58	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 21:58	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 21:58	AVB
	1-Chlorooctane(surr)	121	%	1	60-143			02/24/15 21:58	AVB
	Chlorooctadecane(surr)	86.3	%	1	60-150			02/24/15 21:58	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-02, 3'-4'

Date Collected: 02/18/15

Time Collected: 13:40

Other Information:

Job Sample ID: 15020985.06

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 18:22	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/23/15 18:22	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 18:22	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 18:22	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 18:22	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 18:22	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0150			02/23/15 18:22	SRB
	Trifluorotoluene(surr)	93	%	1.00	81-111			02/23/15 18:22	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 22:22	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 22:22	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 22:22	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 22:22	AVB
	1-Chlorooctane(surr)	118	%	1	60-143			02/24/15 22:22	AVB
	Chlorooctadecane(surr)	90.5	%	1	60-150			02/24/15 22:22	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-02
Date Collected: 02/18/15
Time Collected: 14:10
Other Information:

Job Sample ID: 15020985.07
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 10:45	SRB
	Benzene	BRL	mg/L	1	0.002			02/21/15 10:45	SRB
	Toluene	BRL	mg/L	1	0.002			02/21/15 10:45	SRB
	Ethylbenzene	BRL	mg/L	1	0.002			02/21/15 10:45	SRB
	m- & p-Xylenes	BRL	mg/L	1	0.004			02/21/15 10:45	SRB
	o-Xylene	BRL	mg/L	1	0.002			02/21/15 10:45	SRB
	Xylenes	BRL	mg/L	1	0.006			02/21/15 10:45	SRB
	Trifluorotoluene(surr)	88.8	%	1	75-125			02/21/15 10:45	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.639	0.639		Q9	02/23/15 14:51	AVB
	>C12-C28[1]	BRL	mg/L	0.639	0.639			02/23/15 14:51	AVB
	>C28-C35[1]	BRL	mg/L	0.639	0.7029			02/23/15 14:51	AVB
	Total C6-C35	BRL	mg/L	0.639				02/23/15 14:51	AVB
	1-Chlorooctane(surr)	78.6	%	0.639	70-125			02/23/15 14:51	AVB
	Chlorooctadecane(surr)	90.3	%	0.639	70-125			02/23/15 14:51	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-04, 3'-4'
Date Collected: 02/18/15
Time Collected: 14:25
Other Information:

Job Sample ID: 15020985.08
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.01	0.0050			02/23/15 19:12	SRB
	Benzene	BRL	mg/Kg	1.01	0.0050		Q18	02/23/15 19:12	SRB
	Toluene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:12	SRB
	Ethylbenzene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:12	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.0101			02/23/15 19:12	SRB
	o-Xylene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:12	SRB
	Xylenes	BRL	mg/Kg	1.01	0.0151			02/23/15 19:12	SRB
	Trifluorotoluene(surr)	93.5	%	1.01	81-111			02/23/15 19:12	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 22:45	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 22:45	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 22:45	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 22:45	AVB
	1-Chlorooctane(surr)	132	%	1	60-143			02/24/15 22:45	AVB
	Chlorooctadecane(surr)	101	%	1	60-150			02/24/15 22:45	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-06, 3'-4'
Date Collected: 02/18/15
Time Collected: 16:35
Other Information:

Job Sample ID: 15020985.09
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.01	0.0050			02/23/15 19:38	SRB
	Benzene	BRL	mg/Kg	1.01	0.0050		Q18	02/23/15 19:38	SRB
	Toluene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:38	SRB
	Ethylbenzene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:38	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.0101			02/23/15 19:38	SRB
	o-Xylene	BRL	mg/Kg	1.01	0.0050			02/23/15 19:38	SRB
	Xylenes	BRL	mg/Kg	1.01	0.0151			02/23/15 19:38	SRB
	Trifluorotoluene(surr)	94	%	1.01	81-111			02/23/15 19:38	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 23:32	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 23:32	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 23:32	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 23:32	AVB
	1-Chlorooctane(surr)	130	%	1	60-143			02/24/15 23:32	AVB
	Chlorooctadecane(surr)	99.7	%	1	60-150			02/24/15 23:32	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-03, 3'-4'
Date Collected: 02/18/15
Time Collected: 15:30
Other Information:

Job Sample ID: 15020985.10
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 20:03	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/23/15 20:03	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:03	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:03	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 20:03	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:03	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0149			02/23/15 20:03	SRB
	Trifluorotoluene(surr)	91	%	1.00	81-111			02/23/15 20:03	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/24/15 23:56	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/24/15 23:56	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/24/15 23:56	AVB
	Total C6-C35	BRL	mg/Kg	1				02/24/15 23:56	AVB
	1-Chlorooctane(surr)	100	%	1	60-143			02/24/15 23:56	AVB
	Chlorooctadecane(surr)	77.9	%	1	60-150			02/24/15 23:56	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-03
Date Collected: 02/18/15
Time Collected: 16:25
Other Information:

Job Sample ID: 15020985.11
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 11:10	SRB
	Benzene	BRL	mg/L	1	0.002			02/21/15 11:10	SRB
	Toluene	BRL	mg/L	1	0.002			02/21/15 11:10	SRB
	Ethylbenzene	BRL	mg/L	1	0.002			02/21/15 11:10	SRB
	m- & p-Xylenes	BRL	mg/L	1	0.004			02/21/15 11:10	SRB
	o-Xylene	BRL	mg/L	1	0.002			02/21/15 11:10	SRB
	Xylenes	BRL	mg/L	1	0.006			02/21/15 11:10	SRB
	Trifluorotoluene(surr)	88.8	%	1	75-125			02/21/15 11:10	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.648	0.648		Q9	02/23/15 15:23	AVB
	>C12-C28[1]	BRL	mg/L	0.648	0.648			02/23/15 15:23	AVB
	>C28-C35[1]	BRL	mg/L	0.648	0.7128			02/23/15 15:23	AVB
	Total C6-C35	BRL	mg/L	0.648				02/23/15 15:23	AVB
	1-Chlorooctane(surr)	85.6	%	0.648	70-125			02/23/15 15:23	AVB
	Chlorooctadecane(surr)	100	%	0.648	70-125			02/23/15 15:23	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-05, 8'
Date Collected: 02/19/15
Time Collected: 08:00
Other Information:

Job Sample ID: 15020985.12
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 20:28	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/23/15 20:28	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:28	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:28	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 20:28	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:28	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0150			02/23/15 20:28	SRB
	Trifluorotoluene(surr)	90	%	1.00	81-111			02/23/15 20:28	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 00:19	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 00:19	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 00:19	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 00:19	AVB
	1-Chlorooctane(surr)	125	%	1	60-143			02/25/15 00:19	AVB
	Chlorooctadecane(surr)	92.1	%	1	60-150			02/25/15 00:19	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-07, 8'
Date Collected: 02/19/15
Time Collected: 08:35
Other Information:

Job Sample ID: 15020985.13
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050			02/23/15 20:53	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:53	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:53	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:53	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/23/15 20:53	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/23/15 20:53	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0149			02/23/15 20:53	SRB
	Trifluorotoluene(surr)	87.5	%	1.00	81-111			02/23/15 20:53	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 02:17	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 02:17	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 02:17	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 02:17	AVB
	1-Chlorooctane(surr)	115	%	1	60-143			02/25/15 02:17	AVB
	Chlorooctadecane(surr)	86.6	%	1	60-150			02/25/15 02:17	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-04, 9'
Date Collected: 02/19/15
Time Collected: 09:00
Other Information:

Job Sample ID: 15020985.14
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0050		V1	02/24/15 20:53	SRB
	Benzene	BRL	mg/Kg	0.99	0.0050		Q18	02/24/15 20:53	SRB
	Toluene	BRL	mg/Kg	0.99	0.0050			02/24/15 20:53	SRB
	Ethylbenzene	BRL	mg/Kg	0.99	0.0050			02/24/15 20:53	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.99	0.0099			02/24/15 20:53	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0050			02/24/15 20:53	SRB
	Xylenes	BRL	mg/Kg	0.99	0.0149			02/24/15 20:53	SRB
	Trifluorotoluene(surr)	89.5	%	0.99	81-111			02/24/15 20:53	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 02:40	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 02:40	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 02:40	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 02:40	AVB
	1-Chlorooctane(surr)	126	%	1	60-143			02/25/15 02:40	AVB
	Chlorooctadecane(surr)	98.7	%	1	60-150			02/25/15 02:40	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-04
Date Collected: 02/19/15
Time Collected: 09:10
Other Information:

Job Sample ID: 15020985.15
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 11:35	SRB
	Benzene	BRL	mg/L	1	0.002			02/21/15 11:35	SRB
	Toluene	BRL	mg/L	1	0.002			02/21/15 11:35	SRB
	Ethylbenzene	BRL	mg/L	1	0.002			02/21/15 11:35	SRB
	m- & p-Xylenes	BRL	mg/L	1	0.004			02/21/15 11:35	SRB
	o-Xylene	BRL	mg/L	1	0.002			02/21/15 11:35	SRB
	Xylenes	BRL	mg/L	1	0.006			02/21/15 11:35	SRB
	Trifluorotoluene(surr)	87.5	%	1	75-125			02/21/15 11:35	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.657	0.657		Q9	02/23/15 15:53	AVB
	>C12-C28[1]	BRL	mg/L	0.657	0.657			02/23/15 15:53	AVB
	>C28-C35[1]	BRL	mg/L	0.657	0.7227			02/23/15 15:53	AVB
	Total C6-C35	BRL	mg/L	0.657				02/23/15 15:53	AVB
	1-Chlorooctane(surr)	84.9	%	0.657	70-125			02/23/15 15:53	AVB
	Chlorooctadecane(surr)	101	%	0.657	70-125			02/23/15 15:53	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-08, 6'
Date Collected: 02/19/15
Time Collected: 09:30
Other Information:

Job Sample ID: 15020985.16
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.01	0.0051		V1	02/24/15 21:18	SRB
	Benzene	BRL	mg/Kg	1.01	0.0051		Q18	02/24/15 21:18	SRB
	Toluene	BRL	mg/Kg	1.01	0.0051			02/24/15 21:18	SRB
	Ethylbenzene	BRL	mg/Kg	1.01	0.0051			02/24/15 21:18	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.0101			02/24/15 21:18	SRB
	o-Xylene	BRL	mg/Kg	1.01	0.0051			02/24/15 21:18	SRB
	Xylenes	BRL	mg/Kg	1.01	0.0152			02/24/15 21:18	SRB
	Trifluorotoluene(surr)	90.5	%	1.01	81-111			02/24/15 21:18	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 03:03	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 03:03	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 03:03	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 03:03	AVB
	1-Chlorooctane(surr)	125	%	1	60-143			02/25/15 03:03	AVB
	Chlorooctadecane(surr)	94.7	%	1	60-150			02/25/15 03:03	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-05, 10'
Date Collected: 02/19/15
Time Collected: 10:05
Other Information:

Job Sample ID: 15020985.17
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0049		V1	02/24/15 21:43	SRB
	Benzene	BRL	mg/Kg	0.99	0.0049		Q18	02/24/15 21:43	SRB
	Toluene	BRL	mg/Kg	0.99	0.0049			02/24/15 21:43	SRB
	Ethylbenzene	0.086	mg/Kg	0.99	0.0049			02/24/15 21:43	SRB
	m- & p-Xylenes	0.027	mg/Kg	0.99	0.0099			02/24/15 21:43	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0049			02/24/15 21:43	SRB
	Xylenes	0.027	mg/Kg	0.99	0.0148			02/24/15 21:43	SRB
	Trifluorotoluene(surr)	106	%	0.99	81-111			02/24/15 21:43	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	31.9	mg/Kg	1	23.7		Q18	02/25/15 03:26	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 03:26	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 03:26	AVB
	Total C6-C35	31.9	mg/Kg	1				02/25/15 03:26	AVB
	1-Chlorooctane(surr)	N/A	%	1	60-143		S5	02/25/15 03:26	AVB
	Chlorooctadecane(surr)	101	%	1	60-150			02/25/15 03:26	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-05
Date Collected: 02/19/15
Time Collected: 10:30
Other Information:

Job Sample ID: 15020985.18
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 12:25	SRB
	Benzene	0.0045	mg/L	1	0.002			02/21/15 12:25	SRB
	Toluene	0.0025	mg/L	1	0.002			02/21/15 12:25	SRB
	Ethylbenzene	0.401	mg/L	5	0.01			02/22/15 21:15	SRB
	m- & p-Xylenes	0.198	mg/L	1	0.004			02/21/15 12:25	SRB
	o-Xylene	0.043	mg/L	1	0.002			02/21/15 12:25	SRB
	Xylenes	0.241	mg/L	1	0.006			02/21/15 12:25	SRB
	Trifluorotoluene(surr)	103	%	1	75-125			02/21/15 12:25	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	1.02	mg/L	0.646	0.646		J	02/23/15 16:17	AVB
	>C12-C28[1]	BRL	mg/L	0.646	0.646			02/23/15 16:17	AVB
	>C28-C35[1]	BRL	mg/L	0.646	0.7106			02/23/15 16:17	AVB
	Total C6-C35	1.02	mg/L	0.646				02/23/15 16:17	AVB
	1-Chlorooctane(surr)	109	%	0.646	70-125			02/23/15 16:17	AVB
	Chlorooctadecane(surr)	112	%	0.646	70-125			02/23/15 16:17	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-09, 5'
Date Collected: 02/19/15
Time Collected: 10:45
Other Information:

Job Sample ID: 15020985.19
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.98	0.0049		V1	02/24/15 22:08	SRB
	Benzene	BRL	mg/Kg	0.98	0.0049		Q18	02/24/15 22:08	SRB
	Toluene	BRL	mg/Kg	0.98	0.0049			02/24/15 22:08	SRB
	Ethylbenzene	BRL	mg/Kg	0.98	0.0049			02/24/15 22:08	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.98	0.0098			02/24/15 22:08	SRB
	o-Xylene	BRL	mg/Kg	0.98	0.0049			02/24/15 22:08	SRB
	Xylenes	BRL	mg/Kg	0.98	0.0147			02/24/15 22:08	SRB
	Trifluorotoluene(surr)	90	%	0.98	81-111			02/24/15 22:08	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 03:49	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 03:49	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 03:49	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 03:49	AVB
	1-Chlorooctane(surr)	115	%	1	60-143			02/25/15 03:49	AVB
	Chlorooctadecane(surr)	89.9	%	1	60-150			02/25/15 03:49	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-10, 5'
Date Collected: 02/19/15
Time Collected: 11:07
Other Information:

Job Sample ID: 15020985.20
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0050		V1	02/24/15 22:33	SRB
	Benzene	BRL	mg/Kg	0.99	0.0050		Q18	02/24/15 22:33	SRB
	Toluene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:33	SRB
	Ethylbenzene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:33	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.99	0.0099			02/24/15 22:33	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:33	SRB
	Xylenes	BRL	mg/Kg	0.99	0.0149			02/24/15 22:33	SRB
	Trifluorotoluene(surr)	87	%	0.99	81-111			02/24/15 22:33	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 04:13	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 04:13	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 04:13	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 04:13	AVB
	1-Chlorooctane(surr)	129	%	1	60-143			02/25/15 04:13	AVB
	Chlorooctadecane(surr)	102	%	1	60-150			02/25/15 04:13	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-11, 5'
Date Collected: 02/19/15
Time Collected: 12:27
Other Information:

Job Sample ID: 15020985.21
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	0.99	0.0050		V1	02/24/15 22:58	SRB
	Benzene	BRL	mg/Kg	0.99	0.0050		Q18	02/24/15 22:58	SRB
	Toluene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:58	SRB
	Ethylbenzene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:58	SRB
	m- & p-Xylenes	BRL	mg/Kg	0.99	0.0099			02/24/15 22:58	SRB
	o-Xylene	BRL	mg/Kg	0.99	0.0050			02/24/15 22:58	SRB
	Xylenes	BRL	mg/Kg	0.99	0.0149			02/24/15 22:58	SRB
	Trifluorotoluene(surr)	90	%	0.99	81-111			02/24/15 22:58	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 04:36	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 04:36	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 04:36	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 04:36	AVB
	1-Chlorooctane(surr)	121	%	1	60-143			02/25/15 04:36	AVB
	Chlorooctadecane(surr)	93.5	%	1	60-150			02/25/15 04:36	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-06, 8'
Date Collected: 02/19/15
Time Collected: 12:46
Other Information:

Job Sample ID: 15020985.22
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050		V1	02/24/15 23:23	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/24/15 23:23	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:23	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:23	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/24/15 23:23	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:23	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0149			02/24/15 23:23	SRB
	Trifluorotoluene(surr)	89	%	1.00	81-111			02/24/15 23:23	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 06:08	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 06:08	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 06:08	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 06:08	AVB
	1-Chlorooctane(surr)	126	%	1	60-143			02/25/15 06:08	AVB
	Chlorooctadecane(surr)	94.4	%	1	60-150			02/25/15 06:08	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: TW-06
Date Collected: 02/19/15
Time Collected: 13:55
Other Information:

Job Sample ID: 15020985.23
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/L	1	0.002			02/21/15 12:51	SRB
	Benzene	BRL	mg/L	1	0.002			02/21/15 12:51	SRB
	Toluene	BRL	mg/L	1	0.002			02/21/15 12:51	SRB
	Ethylbenzene	0.0026	mg/L	1	0.002			02/21/15 12:51	SRB
	m- & p-Xylenes	BRL	mg/L	1	0.004			02/21/15 12:51	SRB
	o-Xylene	BRL	mg/L	1	0.002			02/21/15 12:51	SRB
	Xylenes	BRL	mg/L	1	0.006			02/21/15 12:51	SRB
	Trifluorotoluene(surr)	88.8	%	1	75-125			02/21/15 12:51	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.647	0.647		Q9	02/23/15 16:48	AVB
	>C12-C28[1]	BRL	mg/L	0.647	0.647			02/23/15 16:48	AVB
	>C28-C35[1]	BRL	mg/L	0.647	0.7117			02/23/15 16:48	AVB
	Total C6-C35	BRL	mg/L	0.647				02/23/15 16:48	AVB
	1-Chlorooctane(surr)	79.4	%	0.647	70-125			02/23/15 16:48	AVB
	Chlorooctadecane(surr)	91.1	%	0.647	70-125			02/23/15 16:48	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-12, 6'
Date Collected: 02/19/15
Time Collected: 13:03
Other Information:

Job Sample ID: 15020985.24
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	MTBE	BRL	mg/Kg	1.00	0.0050		V1	02/24/15 23:48	SRB
	Benzene	BRL	mg/Kg	1.00	0.0050		Q18	02/24/15 23:48	SRB
	Toluene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:48	SRB
	Ethylbenzene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:48	SRB
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.0100			02/24/15 23:48	SRB
	o-Xylene	BRL	mg/Kg	1.00	0.0050			02/24/15 23:48	SRB
	Xylenes	BRL	mg/Kg	1.00	0.0149			02/24/15 23:48	SRB
	Trifluorotoluene(surr)	85	%	1.00	81-111			02/24/15 23:48	SRB
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	02/25/15 06:31	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			02/25/15 06:31	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			02/25/15 06:31	AVB
	Total C6-C35	BRL	mg/Kg	1				02/25/15 06:31	AVB
	1-Chlorooctane(surr)	132	%	1	60-143			02/25/15 06:31	AVB
	Chlorooctadecane(surr)	99	%	1	60-150			02/25/15 06:31	AVB

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-13, 4'
Date Collected: 02/19/15
Time Collected: 14:03
Other Information:

Job Sample ID: 15020985.25
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,1-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:16	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:16	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dibromoethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,3-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	2,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	2-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	4-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	4-Isopropyltoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Benzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Bromobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Bromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Bromodichloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Bromoform	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Bromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Carbon tetrachloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Chlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Chloroethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 14:16	BPC
	Chloroform	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Chloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Dibromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-13, 4'
Date Collected: 02/19/15
Time Collected: 14:03
Other Information:

Job Sample ID: 15020985.25
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	Dibromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Ethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Isopropylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	MEK	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Methylene chloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Naphthalene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:16	BPC
	n-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	n-Propylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	o-Xylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	sec-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Styrene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	t-butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Tetrachloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Toluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Trichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	Trichlorofluoromethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 14:16	BPC
	Vinyl Chloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:16	BPC
	1,2-Dichloroethane-d4(surr)	107	%	1.00	70-130			02/27/15 14:16	BPC
	Dibromofluoromethane(surr)	106	%	1.00	70-130			02/27/15 14:16	BPC
	p-Bromofluorobenzene(surr)	123	%	1.00	70-130			02/27/15 14:16	BPC
	Toluene-d8(surr)	98.9	%	1.00	70-130			02/27/15 14:16	BPC

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-14, 11'
Date Collected: 02/19/15
Time Collected: 14:32
Other Information:

Job Sample ID: 15020985.26
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,1-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:43	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:43	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dibromoethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,3-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	2,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	2-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	4-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	4-Isopropyltoluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Benzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Bromobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Bromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Bromodichloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Bromoform	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Bromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Carbon tetrachloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Chlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Chloroethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 14:43	BPC
	Chloroform	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Chloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Dibromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-14, 11'
Date Collected: 02/19/15
Time Collected: 14:32
Other Information:

Job Sample ID: 15020985.26
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	Dibromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Ethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Isopropylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	MEK	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Methylene chloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Naphthalene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 14:43	BPC
	n-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	n-Propylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	o-Xylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	sec-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Styrene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	t-butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Tetrachloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Toluene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Trichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	Trichlorofluoromethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 14:43	BPC
	Vinyl Chloride	BRL	mg/Kg	1.00	0.01			02/27/15 14:43	BPC
	1,2-Dichloroethane-d4(surr)	107	%	1.00	70-130			02/27/15 14:43	BPC
	Dibromofluoromethane(surr)	106	%	1.00	70-130			02/27/15 14:43	BPC
	p-Bromofluorobenzene(surr)	123	%	1.00	70-130			02/27/15 14:43	BPC
	Toluene-d8(surr)	97.9	%	1.00	70-130			02/27/15 14:43	BPC

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech

Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-15, 6'-7'
Date Collected: 02/19/15
Time Collected: 14:55
Other Information:

Job Sample ID: 15020985.27
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,1-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 15:10	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 15:10	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dibromoethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dichloroethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,3-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	2,2-Dichloropropane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	2-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	4-Chlorotoluene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	4-Isopropyltoluene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Benzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Bromobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Bromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Bromodichloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Bromoform	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Bromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Carbon tetrachloride	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Chlorobenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Chloroethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 15:10	BPC
	Chloroform	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Chloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Dibromochloromethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC

LABORATORY TEST RESULTS

Job ID : 15020985

Date 3/2/2015

Client Name: Envirotech Attn: David Draybuck

Project Name: Water Line Replacement - Dodson Area

Client Sample ID: SB-15, 6'-7'
Date Collected: 02/19/15
Time Collected: 14:55
Other Information:

Job Sample ID: 15020985.27
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C									
	Dibromomethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Ethylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Isopropylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	MEK	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Methylene chloride	0.0072	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Naphthalene	BRL	mg/Kg	1.00	0.01		V7	02/27/15 15:10	BPC
	n-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	n-Propylbenzene	0.011	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	o-Xylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	sec-Butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Styrene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	t-butylbenzene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Tetrachloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Toluene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Trichloroethylene	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	Trichlorofluoromethane	BRL	mg/Kg	1.00	0.01		V1	02/27/15 15:10	BPC
	Vinyl Chloride	BRL	mg/Kg	1.00	0.01			02/27/15 15:10	BPC
	1,2-Dichloroethane-d4(surr)	106	%	1.00	70-130			02/27/15 15:10	BPC
	Dibromofluoromethane(surr)	106	%	1.00	70-130			02/27/15 15:10	BPC
	p-Bromofluorobenzene(surr)	124	%	1.00	70-130			02/27/15 15:10	BPC
	Toluene-d8(surr)	99.9	%	1.00	70-130			02/27/15 15:10	BPC

[1]-Parameter not available for accreditation

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Total Petroleum Hydrocarbons **Method :** TX 1005 **Reporting Units :** mg/L

QC Batch ID : qb15022326 **Created Date :** 02/23/15 **Created By :** AVBembde

Samples in This QC Batch : 15020985.03,07,11,15,18,23

Sample Preparation : PB15022525 **Prep Method :** TX 1005 **Prep Date :** 02/20/15 15:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/L	1	1		
>C12-C28	TPH-1005-2	BRL	mg/L	1	1		
>C28-C35	TPH-1005-4	BRL	mg/L	1	1.1		
Total C6-C35		BRL	mg/L	1			
Chlorooctadecane(surr)	3386-33-2	94	%	1	70-125		
1-Chlorooctane(surr)	111-85-3	95	%	1	70-125		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	43	42.8	99.5	43	43.6	101	1.9	20	75-125	
>C12-C28	43	41	95.3	43	41.8	97.2	1.9	20	75-125	
>C28-C35	43	44.2	103	43	46.1	107	4.2	20	75-125	

QC Type: MS and MSD
QC Sample ID: 15020960.07

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	43.7	34.9	78.9	43.7	44.6	101	24.7	20	75-125	R3
>C12-C28	BRL	43.7	34.2	77.5	43.7	41.1	93.3	18.5	20	75-125	
>C28-C35	BRL	43.7	35.7	81.4	43.7	41.4	94.4	14.8	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Purgeable Aromatics **Method : SW-846 8021B** **Reporting Units : mg/L**

QC Batch ID : Qb15022347 **Created Date :** 02/20/15 **Created By :** SBojja

Samples in This QC Batch : 15020985.03,07,11,15,18,23

Sample Preparation : PB15022339 **Prep Method :** SW-846 5030C **Prep Date :** 02/20/15 17:00 **Prep By :** SBojja

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
MTBE	1634-04-4	BRL	mg/L	1	0.002		
Benzene	71-43-2	BRL	mg/L	1	0.002		
Toluene	108-88-3	BRL	mg/L	1	0.002		
Ethylbenzene	100-41-4	BRL	mg/L	1	0.002		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/L	1	0.004		
o-Xylene	95-47-6	BRL	mg/L	1	0.002		
Xylenes	1330-20-7	BRL	mg/L	1	0.006		
Trifluorotoluene(surr)	98-08-8	92.5	%	1	75-125		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
MTBE	0.02	0.021	105	0.02	0.022	110	4.6	30	69.4-124	
Benzene	0.02	0.019	95	0.02	0.021	105	10	30	79.1-123	
Toluene	0.02	0.018	90	0.02	0.019	95	5.4	30	72.3-117	
Ethylbenzene	0.02	0.017	85	0.02	0.018	90	5.7	30	77.4-119	
m- & p-Xylenes	0.04	0.036	90	0.04	0.038	95	5.4	30	77.2-127	
o-Xylene	0.02	0.019	95	0.02	0.02	100	5.1	30	71-114	
Xylenes	0.06	0.055	91.7	0.06	0.058	96.7	5.3	30	75.8-121	

QC Type: MS and MSD
QC Sample ID: 15020979.06

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
MTBE	0.003	0.02	0.026	115	0.02	0.026	115	0	21	68-117	
Benzene	0.015	0.02	0.037	110	0.02	0.036	105	4.6	17	65-143	
Toluene	BRL	0.02	0.017	85	0.02	0.017	85	0	29	67-136	
Ethylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	30	80-134	
m- & p-Xylenes	BRL	0.04	0.036	90	0.04	0.034	85	5.7	22	81-131	
o-Xylene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	21	74-134	
Xylenes	BRL	0.06	0.055	91.7	0.06	0.052	86.7	5.6	21	80-136	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : **Purgeable Aromatics** **Method :** **SW-846 8021B** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb15022431 **Created Date :** 02/23/15 **Created By :** SBojja

Samples in This QC Batch : 15020985.01,02,04,05,06,08,09,10,12,13

Sample Preparation : PB15022428 **Prep Method :** SW-846 5035A **Prep Date :** 02/23/15 15:00 **Prep By :** SBojja

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
MTBE	1634-04-4	BRL	mg/Kg	1	0.005		
Benzene	71-43-2	BRL	mg/Kg	1	0.005		
Toluene	108-88-3	BRL	mg/Kg	1	0.005		
Ethylbenzene	100-41-4	BRL	mg/Kg	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1	0.01		
o-Xylene	95-47-6	BRL	mg/Kg	1	0.005		
Xylenes	1330-20-7	BRL	mg/Kg	1	0.015		
Trifluorotoluene(surr)	98-08-8	111	%	1	81-111		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
MTBE	0.05	0.05	100	0.05	0.052	104	3.9	20	67.2-132	
Benzene	0.05	0.049	98	0.05	0.048	96	2.1	20	76.2-128	
Toluene	0.05	0.047	94	0.05	0.046	92	2.2	20	74.2-126	
Ethylbenzene	0.05	0.047	94	0.05	0.048	96	2.1	20	79.4-125	
m- & p-Xylenes	0.1	0.095	95	0.1	0.097	97	2.1	20	76.3-126	
o-Xylene	0.05	0.051	102	0.05	0.053	106	3.9	20	77.1-123	
Xylenes	0.15	0.146	97.3	0.15	0.15	100	2.7	20	77.2-125	

QC Type: MS and MSD
QC Sample ID: 15020985.04

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
MTBE	BRL	0.05	0.051	102	0.05	0.054	108	5.7	26	76-134	
Benzene	BRL	0.05	0.05	100	0.05	0.046	92	8.3	19	68-138	
Toluene	BRL	0.05	0.048	96	0.05	0.045	90	6.5	19	67-135	
Ethylbenzene	BRL	0.05	0.048	96	0.05	0.045	90	6.5	20	71-127	
m- & p-Xylenes	BRL	0.1	0.099	99	0.101	0.092	91.1	7.3	27	56-135	
o-Xylene	BRL	0.05	0.053	106	0.05	0.05	100	5.8	24	56-134	
Xylenes	BRL	0.149	0.152	102	0.151	0.142	94	6.8	25	59-134	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : **Purgeable Aromatics** **Method :** **SW-846 8021B** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb15022450 **Created Date :** 02/24/15 **Created By :** SBojja

Samples in This QC Batch : 15020985.14,16,17,19,20,21,22,24

Sample Preparation : PB15022445 **Prep Method :** SW-846 5035A **Prep Date :** 02/24/15 16:00 **Prep By :** SBojja

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
MTBE	1634-04-4	BRL	mg/Kg	1	0.005		
Benzene	71-43-2	BRL	mg/Kg	1	0.005		
Toluene	108-88-3	BRL	mg/Kg	1	0.005		
Ethylbenzene	100-41-4	BRL	mg/Kg	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1	0.01		
o-Xylene	95-47-6	BRL	mg/Kg	1	0.005		
Xylenes	1330-20-7	BRL	mg/Kg	1	0.015		
Trifluorotoluene(surr)	98-08-8	93	%	1	81-111		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
MTBE	0.05	0.062	124	0.05	0.056	112	10.2	20	67.2-132	
Benzene	0.05	0.052	104	0.05	0.049	98	5.9	20	76.2-128	
Toluene	0.05	0.051	102	0.05	0.05	100	2	20	74.2-126	
Ethylbenzene	0.05	0.052	104	0.05	0.052	104	0.0	20	79.4-125	
m- & p-Xylenes	0.1	0.104	104	0.1	0.104	104	0.0	20	76.3-126	
o-Xylene	0.05	0.055	110	0.05	0.055	110	0.0	20	77.1-123	
Xylenes	0.15	0.159	106	0.15	0.159	106	0.0	20	77.2-125	

QC Type: MS and MSD
QC Sample ID: 15020985.22

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
MTBE	BRL	0.05	0.052	104	0.05	0.051	102	1.9	26	76-134	
Benzene	BRL	0.05	0.049	98	0.05	0.046	92	6.3	19	68-138	
Toluene	BRL	0.05	0.047	94	0.05	0.046	92	2.2	19	67-135	
Ethylbenzene	BRL	0.05	0.049	98	0.05	0.047	94	4.2	20	71-127	
m- & p-Xylenes	BRL	0.101	0.098	97	0.101	0.095	94.1	3.1	27	56-135	
o-Xylene	BRL	0.05	0.053	106	0.05	0.052	104	1.9	24	56-134	
Xylenes	BRL	0.151	0.151	100	0.151	0.147	97.4	2.7	25	59-134	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Total Petroleum Hydrocarbons **Method :** TX 1005 **Reporting Units :** mg/Kg

QC Batch ID : Qb15022520 **Created Date :** 02/25/15 **Created By :** AVBembde

Samples in This QC Batch : 15020985.01,02,04,05,06,08,09,10,12

Sample Preparation : PB15022514 **Prep Method :** TX 1005 **Prep Date :** 02/23/15 16:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/Kg	1	23.7		
>C12-C28	TPH-1005-2	BRL	mg/Kg	1	20.3		
>C28-C35	TPH-1005-4	BRL	mg/Kg	1	17.7		
Total C6-C35		BRL	mg/Kg	1			
Chlorooctadecane(surr)	3386-33-2	97.3	%	1	60-150		
1-Chlorooctane(surr)	111-85-3	127	%	1	60-143		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	433	86.6	500	487	97.4	11.7	20	75-125	
>C12-C28	500	485	97	500	520	104	7	20	75-125	
>C28-C35	500	526	105	500	578	116	9.4	20	75-125	

QC Type: MS and MSD
QC Sample ID: 15021139.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	500	447	87.9	500	526	104	16.5	20	75-125	
>C12-C28	BRL	500	535	105	500	534	104	0.2	20	75-125	
>C28-C35	BRL	500	482	95.6	500	479	95	0.6	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Total Petroleum Hydrocarbons **Method :** TX 1005 **Reporting Units :** mg/Kg

QC Batch ID : Qb15022616 **Created Date :** 02/26/15 **Created By :** AVBembde

Samples in This QC Batch : 15020985.13,14,16,17,19,20,21,22,24

Sample Preparation : PB15022606 **Prep Method :** TX 1005 **Prep Date :** 02/24/15 14:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/Kg	1	23.7		
>C12-C28	TPH-1005-2	BRL	mg/Kg	1	20.3		
>C28-C35	TPH-1005-4	BRL	mg/Kg	1	17.7		
Total C6-C35		BRL	mg/Kg	1			
Chlorooctadecane(surr)	3386-33-2	93.5	%	1	60-150		
1-Chlorooctane(surr)	111-85-3	122	%	1	60-143		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	550	110	500	535	107	2.8	20	75-125	
>C12-C28	500	562	112	500	547	109	2.7	20	75-125	
>C28-C35	500	503	101	500	486	97.2	3.4	20	75-125	

QC Type: MS and MSD
QC Sample ID: 15020985.21

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	500	524	104	500	547	109	4.3	20	75-125	
>C12-C28	BRL	500	517	102	500	548	108	5.9	20	75-125	
>C28-C35	BRL	500	458	91.3	500	477	95.1	4.1	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Volatile Organic Compounds **Method :** SW-846 8260C **Reporting Units :** mg/Kg

QC Batch ID : Qb15022767 **Created Date :** 02/27/15 **Created By :** BPcastro

Samples in This QC Batch : 15020985.25,26,27

Sample Preparation : PB15022758 **Prep Method :** SW-846 5035A **Prep Date :** 02/27/15 11:00 **Prep By :** BPcastro

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit	Qual
1,1,1,2-Tetrachloroethane	630-20-6	BRL	mg/Kg	1.00	0.005	
1,1,1-Trichloroethane	71-55-6	BRL	mg/Kg	1.00	0.005	
1,1,2,2-Tetrachloroethane	79-34-5	BRL	mg/Kg	1.00	0.005	
1,1,2-Trichloroethane	79-00-5	BRL	mg/Kg	1.00	0.005	
1,1-Dichloroethane	75-34-3	BRL	mg/Kg	1.00	0.005	
1,1-Dichloroethylene	75-35-4	BRL	mg/Kg	1.00	0.005	
1,1-Dichloropropene	563-58-6	BRL	mg/Kg	1.00	0.005	
1,2,3-trichlorobenzene	87-61-6	BRL	mg/Kg	1.00	0.005	V7
1,2,3-Trichloropropane	96-18-4	BRL	mg/Kg	1.00	0.005	V7
1,2,4-Trichlorobenzene	120-82-1	BRL	mg/Kg	1.00	0.005	
1,2,4-Trimethylbenzene	95-63-6	BRL	mg/Kg	1.00	0.005	
1,2-Dibromo-3-chloropropa	96-12-8	BRL	mg/Kg	1.00	0.005	
1,2-Dibromoethane	106-93-4	BRL	mg/Kg	1.00	0.005	
1,2-Dichlorobenzene	95-50-1	BRL	mg/Kg	1.00	0.005	
1,2-Dichloroethane	107-06-2	BRL	mg/Kg	1.00	0.005	
1,2-Dichloropropane	78-87-5	BRL	mg/Kg	1.00	0.005	
1,3,5-Trimethylbenzene	108-67-8	BRL	mg/Kg	1.00	0.005	
1,3-Dichlorobenzene	541-73-1	BRL	mg/Kg	1.00	0.005	
1,3-Dichloropropane	142-28-9	BRL	mg/Kg	1.00	0.005	
1,4-Dichlorobenzene	106-46-7	BRL	mg/Kg	1.00	0.005	
2,2-Dichloropropane	594-20-7	BRL	mg/Kg	1.00	0.005	
2-Chlorotoluene	95-49-8	BRL	mg/Kg	1.00	0.005	
4-Chlorotoluene	106-43-4	BRL	mg/Kg	1.00	0.005	
4-Isopropyltoluene	99-87-6	BRL	mg/Kg	1.00	0.005	
Benzene	71-43-2	BRL	mg/Kg	1.00	0.005	
Bromobenzene	108-86-1	BRL	mg/Kg	1.00	0.005	
Bromochloromethane	74-97-5	BRL	mg/Kg	1.00	0.005	
Bromodichloromethane	75-27-4	BRL	mg/Kg	1.00	0.005	
Bromoform	75-25-2	BRL	mg/Kg	1.00	0.005	
Bromomethane	74-83-9	BRL	mg/Kg	1.00	0.005	
Carbon tetrachloride	56-23-5	BRL	mg/Kg	1.00	0.005	
Chlorobenzene	108-90-7	BRL	mg/Kg	1.00	0.005	
Chloroethane	75-00-3	BRL	mg/Kg	1.00	0.005	V1
Chloroform	67-66-3	BRL	mg/Kg	1.00	0.005	
Chloromethane	74-87-3	BRL	mg/Kg	1.00	0.005	
cis-1,2-Dichloroethylene	156-59-2	BRL	mg/Kg	1.00	0.005	
cis-1,3-Dichloropropene	10061-01-5	BRL	mg/Kg	1.00	0.005	
Dibromochloromethane	124-48-1	BRL	mg/Kg	1.00	0.005	
Dibromomethane	74-95-3	BRL	mg/Kg	1.00	0.005	
Dichlorodifluoromethane	75-71-8	BRL	mg/Kg	1.00	0.005	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Volatile Organic Compounds **Method :** SW-846 8260C **Reporting Units :** mg/Kg

QC Batch ID : Qb15022767 **Created Date :** 02/27/15 **Created By :** BPcastro

Samples in This QC Batch : 15020985.25,26,27

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Ethylbenzene	100-41-4	BRL	mg/Kg	1.00	0.005		
Isopropylbenzene	98-82-8	BRL	mg/Kg	1.00	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1.00	0.01		
MEK	78-93-3	BRL	mg/Kg	1.00	0.005		
Methylene chloride	75-09-2	BRL	mg/Kg	1.00	0.005		
Naphthalene	91-20-3	BRL	mg/Kg	1.00	0.005		V7
n-Butylbenzene	104-51-8	BRL	mg/Kg	1.00	0.005		
n-Propylbenzene	103-65-1	BRL	mg/Kg	1.00	0.005		
o-Xylene	95-47-6	BRL	mg/Kg	1.00	0.005		
sec-Butylbenzene	135-98-8	BRL	mg/Kg	1.00	0.005		
Styrene	100-42-5	BRL	mg/Kg	1.00	0.005		
t-butylbenzene	98-06-6	BRL	mg/Kg	1.00	0.005		
Tetrachloroethylene	127-18-4	BRL	mg/Kg	1.00	0.005		
Toluene	108-88-3	BRL	mg/Kg	1.00	0.005		
trans-1,2-Dichloroethylene	156-60-5	BRL	mg/Kg	1.00	0.005		
trans-1,3-Dichloropropene	10061-02-6	BRL	mg/Kg	1.00	0.005		
Trichloroethylene	79-01-6	BRL	mg/Kg	1.00	0.005		
Trichlorofluoromethane	75-69-4	BRL	mg/Kg	1.00	0.005		V1
Vinyl Chloride	75-01-4	BRL	mg/Kg	1.00	0.005		
Dibromofluoromethane(surr	1868-53-7	105	%	1.00	70-130		
1,2-Dichloroethane-d4(surr	17060-07-0	103	%	1.00	70-130		
Toluene-d8(surr)	2037-26-5	101	%	1.00	70-130		
p-Bromofluorobenzene(surr	460-00-4	123	%	1.00	70-130		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.019	95	0.02	0.02	100	5	30	71.4-131	
1,1,1-Trichloroethane	0.02	0.021	105	0.02	0.021	105	0	30	69.6-140	
1,1,2,2-Tetrachloroethane	0.02	0.018	90	0.02	0.018	90	0	30	66.6-128	
1,1,2-Trichloroethane	0.02	0.019	95	0.02	0.019	95	0	30	72.8-125	
1,1-Dichloroethane	0.02	0.019	95	0.02	0.019	95	0	30	72.7-129	
1,1-Dichloroethylene	0.02	0.02	100	0.02	0.019	95	5	30	71.4-131	
1,1-Dichloropropene	0.02	0.02	100	0.02	0.02	100	0	30	75.9-132	
1,2,3-trichlorobenzene	0.02	0.016	80	0.02	0.016	80	0	30	56.7-153	V7
1,2,3-Trichloropropane	0.02	0.019	95	0.02	0.018	90	5	30	61.6-138	
1,2,4-Trichlorobenzene	0.02	0.017	85	0.02	0.018	90	6	30	55.9-150	V7
1,2,4-Trimethylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	71.1-131	
1,2-Dibromo-3-chloropropa	0.02	0.016	80	0.02	0.016	80	0	30	52.4-150	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : Volatile Organic Compounds **Method : SW-846 8260C** **Reporting Units : mg/Kg**

QC Batch ID : Qb15022767 **Created Date :** 02/27/15 **Created By :** BPcastro

Samples in This QC Batch : 15020985.25,26,27

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,2-Dibromoethane	0.02	0.019	95	0.02	0.019	95	0	30	72.9-125	
1,2-Dichlorobenzene	0.02	0.02	100	0.02	0.02	100	0	30	76.1-126	
1,2-Dichloroethane	0.02	0.02	100	0.02	0.019	95	5	30	66.4-134	
1,2-Dichloropropane	0.02	0.019	95	0.02	0.019	95	0	30	70.2-128	
1,3,5-Trimethylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	75.1-127	
1,3-Dichlorobenzene	0.02	0.021	105	0.02	0.02	100	5	30	73.9-126	
1,3-Dichloropropane	0.02	0.018	90	0.02	0.018	90	0	30	68.3-124	
1,4-Dichlorobenzene	0.02	0.021	105	0.02	0.021	105	0	30	72.3-127	
2,2-Dichloropropane	0.02	0.021	105	0.02	0.021	105	0	30	68.5-138	
2-Chlorotoluene	0.02	0.021	105	0.02	0.021	105	0	30	71.7-128	
4-Chlorotoluene	0.02	0.021	105	0.02	0.021	105	0	30	72.2-126	
4-Isopropyltoluene	0.02	0.018	90	0.02	0.018	90	0	30	77.5-125	
Benzene	0.02	0.02	100	0.02	0.019	95	5	30	74-126	
Bromobenzene	0.02	0.02	100	0.02	0.02	100	0	30	73.3-129	
Bromochloromethane	0.02	0.016	80	0.02	0.017	85	6	30	68.8-131	
Bromodichloromethane	0.02	0.021	105	0.02	0.021	105	0	30	69-135	
Bromoform	0.02	0.019	95	0.02	0.019	95	0	30	62-146	
Bromomethane	0.02	0.02	100	0.02	0.02	100	0	30	58.7-139	
Carbon tetrachloride	0.02	0.023	115	0.02	0.022	110	4	30	68.7-135	
Chlorobenzene	0.02	0.019	95	0.02	0.019	95	0	30	73.3-129	
Chloroethane	0.02	0.027	135	0.02	0.027	135	0	30	66.2-129	L1,V1
Chloroform	0.02	0.02	100	0.02	0.021	105	5	30	73.7-134	
Chloromethane	0.02	0.017	85	0.02	0.018	90	6	30	51.4-135	
cis-1,2-Dichloroethylene	0.02	0.019	95	0.02	0.019	95	0	30	72.4-132	
cis-1,3-Dichloropropene	0.02	0.02	100	0.02	0.021	105	5	30	67.7-134	
Dibromochloromethane	0.02	0.02	100	0.02	0.02	100	0	30	73.2-126	
Dibromomethane	0.02	0.019	95	0.02	0.019	95	0	30	69.9-134	
Dichlorodifluoromethane	0.02	0.019	95	0.02	0.02	100	5	30	36.8-144	
Ethylbenzene	0.02	0.02	100	0.02	0.02	100	0	30	72.2-128	
Isopropylbenzene	0.02	0.019	95	0.02	0.019	95	0	30	71.2-131	
m- & p-Xylenes	0.04	0.04	100	0.04	0.04	100	0	30	70.7-131	
MEK	0.02	0.023	115	0.02	0.02	100	14	30	52.5-152	
Methylene chloride	0.02	0.019	95	0.02	0.02	100	5	30	70.6-129	
Naphthalene	0.02	0.015	75	0.02	0.016	80	6	30	60.7-145	V7
n-Butylbenzene	0.02	0.021	105	0.02	0.017	85	21	30	66.5-136	
n-Propylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	73.3-126	
o-Xylene	0.02	0.02	100	0.02	0.02	100	0	30	71.6-130	
sec-Butylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	77.9-124	
Styrene	0.02	0.02	100	0.02	0.02	100	0	30	71.1-131	
t-butylbenzene	0.02	0.019	95	0.02	0.019	95	0	30	74.4-130	
Tetrachloroethylene	0.02	0.025	125	0.02	0.016	80	44	30	62.6-157	R4
Toluene	0.02	0.019	95	0.02	0.02	100	5	30	73.3-127	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 15020985 **Date :** 3/2/2015

Analysis : **Volatile Organic Compounds** **Method :** **SW-846 8260C** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb15022767 **Created Date :** 02/27/15 **Created By :** BPcastro

Samples in This QC Batch : 15020985.25,26,27

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
trans-1,2-Dichloroethylene	0.02	0.02	100	0.02	0.019	95	5	30	80-120	
trans-1,3-Dichloropropene	0.02	0.02	100	0.02	0.02	100	0	30	71.5-124	
Trichloroethylene	0.02	0.02	100	0.02	0.019	95	5	30	69.2-133	
Trichlorofluoromethane	0.02	0.033	165	0.02	0.033	165	0	30	63.9-140	L1,V1
Vinyl Chloride	0.02	0.023	115	0.02	0.023	115	0	30	40.9-159	

Refer to the Definition page for terms.

Sample Condition Checklist

A&B JobID : **15020985**	Date Received : **02/20/2015**	Time Received : **11:07AM**
Client Name : **Envirotech**		
Temperature : **4.1+0.7C/F=4.8°C**	Sample pH : **N/A**	
Thermometer ID : **140539697**	pH Paper ID : **N/A**	

	Check Points	Yes	No	N/A
1.	**Cooler seal present and signed.**		X	
2.	**Sample(s) in a cooler.**	X		
3.	**If yes, ice in cooler.**	X		
4.	**Sample(s) received with chain-of-custody.**	X		
5.	**C-O-C signed and dated.**	X		
6.	**Sample(s) received with signed sample custody seal.**		X	
7.	**Sample containers arrived intact. (If no comment).**	X		
8.	**Matrix :** **Water** ☑ **Soil** ☑ **Liquid** ☐ **Sludge** ☐ **Solid** ☐ **Cassette** ☐ **Tube** ☐ **Bulk** ☐ **Badge** ☐ **Food** ☐ **Other** ☐			
9.	**Sample(s) were received in appropriate container(s).**	X		
10.	**Sample(s) were received with proper preservative**	X		
11.	**All samples were logged or labeled.**	X		
12.	**Sample ID labels match C-O-C ID's**	X		
13.	**Bottle count on C-O-C matches bottles found.**	X		
14.	**Sample volume is sufficient for analyses requested.**	X		
15.	**Samples were received within the hold time.**	X		
16.	**VOA vials completely filled.**	X		
17.	**Sample accepted.**	X		

Comments : Include actions taken to resolve discrepancies/problem:

Received by : TKellar

Check in by/date : CCripe / 02/20/2015

APPENDIX C

Tables

Table 1

SUMMARY OF SOIL LABORATORY ANALYTICAL RESULTS - BTEX-MTBE/TPH
WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

Sample ID	Date	Depth (feet)	MTBE (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	BTEX (mg/kg)	TPH C6-C12 (mg/kg)	TPH >C12-C28 (mg/kg)	TPH >C28-C35 (mg/kg)	Total TPH (mg/kg)
TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$)			800	120.0	5,900	6,400	6000	NA	1,600	2,300	2300	NA
*TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$)			0.62	0.026	8.20	7.60	120	NA	65	200	200	NA
LPST Facility 9302 and 9303 Jensen Drive												
SB-01 (5-6')	2/18/2015	5-6'	<0.0049	<0.0049	<0.0049	<0.0049	<0.0148	<SDL	<23.7	<20.3	<17.7	<SDL
TW-01 (8-9')	2/18/2015	8-9'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0150	<SDL	<23.7	<20.3	<17.7	<SDL
SB-02 (9')	2/18/2015	8-9'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
LPST Facility 8917 Frendly Drive & 4114 Laura Koppe Road												
SB-03 (2-3')	2/18/2015	2-3'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
TW-02 (3-4')	2/18/2015	3-4'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0150	<SDL	<23.7	<20.3	<17.7	<SDL
SB-04 (3-4')	2/18/2015	3-4'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0151	<SDL	<23.7	<20.3	<17.7	<SDL
LPST Facility 3616 Laura Koppe Road												
SB-06 (3-4')	2/18/2015	3-4'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0151	<SDL	<23.7	<20.3	<17.7	<SDL
TW-03 (3-4')	2/18/2015	3-4'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
SB-05 (8')	2/19/2015	7-8'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0150	<SDL	<23.7	<20.3	<17.7	<SDL
SB-07 (8')	2/19/2015	7-8'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
TW-04 (9')	2/19/2015	8-9'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
SB-08 (6')	2/19/2015	5-6'	<0.0051	<0.0051	<0.0051	<0.0051	<0.0152	<SDL	<23.7	<20.3	<17.7	<SDL
LPST Facility 7702 Eastex Freeway												
TW-05 (10')	2/19/2015	9-10'	<0.0049	<0.0049	<0.0049	**0.086**	**0.027**	**0.113**	**31.9**	<20.3	<17.7	<SDL
SB-09 (5')	2/19/2015	4-5'	<0.0049	<0.0049	<0.0049	<0.0049	<0.0147	<SDL	<23.7	<20.3	<17.7	<SDL
SB-10 (5')	2/19/2015	4-5'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
LPST Facility 4902 Laura Koppe												
SB-11 (5')	2/19/2015	4-5'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
TW-06 (8')	2/19/2015	7-8'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL
SB-12 (6')	2/19/2015	5-6'	<0.0050	<0.0050	<0.0050	<0.0050	<0.0149	<SDL	<23.7	<20.3	<17.7	<SDL

Notes:

1. PCLs indicates TRRP Tier 1 Tables protective concentration limits.
2. TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$) indicates the PCLs for the combined soil exposure pathways (Residential, 0.5-acre site).
3. TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$) indicates the PCLs for the leaching of soil concentrations into groundwater (Residential, 0.5-acre site).
4. Analyses by the following methods: BTEX - EPA Method SW846-8021B; TPH - Texas Method 1005.
5. Detections are provided in bold font.
6. NA indicates Not Applicable, or Not Available.
7. <SDL indicates less than or below sample detection limit (SDL).
8. Italics indicates SDL exceeds PCL.
9. J indicates estimated concentration between MDL and PQL.

TABLE 2

SUMMARY OF SOIL LABORATORY ANALYTICAL RESULTS - VOCs
WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

Sample ID	TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$)	*TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$)	SB-13 (4')	SB-14 (11')	SB-15 (6-7')
Date			2/19/2015	2/19/2015	2/19/2015
Depth (feet)			3-4'	10-11'	6-7'
All concentrations are in mg/kg					
1,1,1,2-Tetrachloroethane	65	1.4	<0.01	<0.01	<0.01
1,1,1-Trichloroethane	53000.0	4.6	<0.01	<0.01	<0.01
1,1,2,2-Tetrachloroethane	30	0.0023	<0.01	<0.01	<0.01
1,1,2-Trichloroethane	18	0.02	<0.01	<0.01	<0.01
1,1-Dichloroethane	11000	18	<0.01	<0.01	<0.01
1,1-Dichloroethylene	2300	0.05	<0.01	<0.01	<0.01
1,1-Dichloropropene	36	0.13	<0.01	<0.01	<0.01
1,2,3-trichlorobenzene	120	26	<0.01	<0.01	<0.01
1,2,3-Trichloropropane	0.2	0.00053	<0.01	<0.01	<0.01
1,2,4-Trichlorobenzene	120	4.8	<0.01	<0.01	<0.01
1,2,4-Trimethylbenzene	150	49	<0.01	<0.01	<0.01
1,2-Dibromo-3-chloropropane	0.15	0.0017	<0.01	<0.01	<0.01
1,2-Dibromoethane	0.73	0.00021	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	720	18	<0.01	<0.01	<0.01
1,2-Dichloroethane	11	0.014	<0.01	<0.01	<0.01
1,2-Dichloropropane	61	0.023	<0.01	<0.01	<0.01
1,3,5-Trimethylbenzene	110	53	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	120	6.7	<0.01	<0.01	<0.01
1,3-Dichloropropane	36	0.064	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	250	2.1	<0.01	<0.01	<0.01
2,2-Dichloropropane	61	0.12	<0.01	<0.01	<0.01
2-Chlorotoluene	1200	9.1	<0.01	<0.01	<0.01
4-Chlorotoluene	1600	11	<0.01	<0.01	<0.01
4-Isopropyltoluene	8200	230	<0.01	<0.01	<0.01
Benzene	120	0.026	<0.01	<0.01	<0.01
Bromobenzene	390	2.3	<0.01	<0.01	<0.01
Bromochloromethane	3300	3	<0.01	<0.01	<0.01
Bromodichloromethane	98	0.065	<0.01	<0.01	<0.01
Bromoform	400	0.63	<0.01	<0.01	<0.01
Bromomethane	46	0.13	<0.01	<0.01	<0.01
Carbon tetrachloride	35	0.062	<0.01	<0.01	<0.01

TABLE 2

SUMMARY OF SOIL LABORATORY ANALYTICAL RESULTS - VOCs
WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

Sample ID	TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$)	*TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$)	SB-13 (4')	SB-14 (11')	SB-15 (6-7')
Date			2/19/2015	2/19/2015	2/19/2015
Depth (feet)			3-4'	10-11'	6-7'
All concentrations are in mg/kg					
Chlorobenzene	520	1.1	<0.01	<0.01	<0.01
Chloroethane	27000	31	<0.01	<0.01	<0.01
Chloroform	16	1	<0.01	<0.01	<0.01
Chloromethane	140	0.41	<0.01	<0.01	<0.01
cis-1,2-Dichloroethylene	140	0.25	<0.01	<0.01	<0.01
cis-1,3-Dichloropropene	8	0.0066	<0.01	<0.01	<0.01
Dibromochloromethane	72	0.049	<0.01	<0.01	<0.01
Dibromomethane	81	1.1	<0.01	<0.01	<0.01
Dichlorodifluoromethane	1400	240	<0.01	<0.01	<0.01
Ethylbenzene	6400	7.6	<0.01	<0.01	<0.01
Isopropylbenzene	4300	350	<0.01	<0.01	<0.01
m- & p-Xylenes	8900	150	<0.01	<0.01	<0.01
MEK	40000	29	<0.01	<0.01	<0.01
Methylene chloride	1600	0.013	<0.01	<0.01	**0.0072**
Naphthalene	220	31	<0.01	<0.01	<0.01
n-Butylbenzene	3300	150	<0.01	<0.01	<0.01
n-Propylbenzene	2200	45	<0.01	<0.01	**0.011**
o-Xylene	48000	71	<0.01	<0.01	<0.01
sec-Butylbenzene	3300	85	<0.01	<0.01	<0.01
Styrene	6700	3.3	<0.01	<0.01	<0.01
t-butylbenzene	3300	100	<0.01	<0.01	<0.01
Tetrachloroethylene	710	0.05	<0.01	<0.01	<0.01
Toluene	5900	8.2	<0.01	<0.01	<0.01
trans-1,2-Dichloroethylene	590	0.49	<0.01	<0.01	<0.01
trans-1,3-Dichloropropene	36	0.036	<0.01	<0.01	<0.01
Trichloroethylene	18	0.034	<0.01	<0.01	<0.01
Trichlorofluoromethane	25000	130	<0.01	<0.01	<0.01
Vinyl Chloride	3.7	0.022	<0.01	<0.01	<0.01

TABLE 2

SUMMARY OF SOIL LABORATORY ANALYTICAL RESULTS - VOCs
WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

Sample ID	TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$)	*TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$)	SB-13 (4')	SB-14 (11')	SB-15 (6-7')
Date			2/19/2015	2/19/2015	2/19/2015
Depth (feet)			3-4'	10-11'	6-7'
All concentrations are in mg/kg					

Notes:

1. PCLs indicates TRRP Tier 1 Tables protective concentration limits.
2. TRRP Tier 1 PCLs ($^{Tot}Soil_{Comb}$) indicates the PCLs for the combined soil exposure pathways (Residential, 0.5-acre site).
3. TRRP Tier 1 PCLs ($^{GW}Soil_{Ing}$) indicates the PCLs for the leaching of soil concentrations into groundwater (Residential, 0.5-acre site).
5. Detections are provided in bold font.
6. NA indicates Not Applicable, or Not Available.
7. <SDL indicates less than or below sample detection limit (SDL).
8. Italics indicates SDL exceeds PCL.
9. J indicates estimated concentration between MDL and PQL.

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL DATA - BTEX/TPH
WATER LINE REPLACEMENT IN DODSON AREA
HOUSTON, HARRIS COUNTY, TEXAS

Sample ID	Date	MTBE (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl-Benzene (mg/L)	Xylenes (mg/L)	BTEX (mg/L)	TPH C6-C12 (mg/L)	TPH >C12-C28 (mg/L)	TPH >C28-C35 (mg/L)	Total TPH (mg/L)
TRRP Tier 1 PCLs ($^{GW}GW_{Ing}$)		0.24	0.005	1	0.7	10	NA	0.98	0.98	0.98	NA
TRRP Tier 1 PCLs ($^{GW}GW_{Class\ 3}$)		24	0.05	100	70	1000	NA	97	97	97	NA
TRRP Tier 1 PCLs ($^{Air}GW_{Inh\text{-}V}$)		4000	180	64000	30000	10000	NA	4250	7497	NA	NA
LPST Facility 9302 and 9303 Jensen Drive											
TW-01	2/18/2015	<0.002	<0.002	<0.002	<0.002	<0.006	<SDL	<0.642	<0.642	<0.642	<SDL
LPST Facility 8917 Frendly Drive & 4114 Laura Koppe Road											
TW-02	2/18/2015	<0.002	<0.002	<0.002	<0.002	<0.006	<SDL	<0.642	<0.642	<0.7029	<SDL
LPST Facility 3616 Laura Koppe Road											
TW-03	2/18/2015	<0.002	<0.002	<0.002	<0.002	<0.006	<SDL	<0.642	<0.642	<0.7128	<SDL
TW-04	2/19/2015	<0.002	<0.002	<0.002	<0.002	<0.006	<SDL	<0.657	<0.657	<0.7727	<SDL
LPST Facility 7702 Eastex Freeway											
TW-05	2/19/2015	<0.002	**0.0045**	**0.0025**	**0.401**	**0.241**	**0.649**	**1.02**	<0.646	<0.646	**1.02**
LPST Facility 4902 Laura Koppe											
TW-06	2/19/2015	<0.002	<0.002	<0.002	**0.0026**	<0.006	**0.0026**	<0.647	<0.647	<0.7117	<SDL

Notes:

1. PCLs indicates TRRP Tier 1 Tables protective concentration limits.
2. TRRP Tier 1 PCLs ($^{GW}GW_{Ing}$) indicates the PCLs for groundwater ingestion and is the same as MCLs under Federal Drinking Water Standards.
3. TRRP Tier 1 PCLs ($^{GW}GW_{Class\ 3}$) indicates the PCLs for Class 3 groundwater conditions.
4. TRRP Tier 1 PCLs ($^{Air}GW_{Inh\text{-}V}$) indicates the PCLs for the inhalation of water vapor.
5. Analyses by the following methods: BTEX/MTBE - EPA Method SW846-8021; TPH - Texas Method 1005
6. Detections are provided in bold font.
7. NA indicates Not Applicable, or Not Available
8. Shaded cell indicates PCL exceedence, if applicable
9. Italics indicates detection limit exceeded the PCL.
10. J value indicates and estimated concentration between the MDL and PQL.

APPENDIX D

Qualifications of Environmental Professional

TOM MURPHY
PROJECT MANAGER
ENVIRONMENTAL ENGINEERING SERVICES

EDUCATION
Texas State (formerly Southwest Texas State University): B. S., Geography-Resource and Environmental Studies/Biology, 1993

REGISTRATION/TRAINING
40/8-Hour CFR 1910.120, OSHA Training and Refreshers (HazWop)
40 CFR 265.16, Hazardous Waste Management Certification
49 CFR 172 & 173, DOT Hazardous Materials Training
29 CFR 1919.134, Respirator Fit Test/Training
RRC Rule 36 & API-RP 49, Hydrogen Sulfide Training
ExxonMobil LPS and OIMS Training
Facility, Client or Site-Specific Safety Training and Protocols

PROFESSIONAL EXPERIENCE
Project Manager
Project Geologist/Scientist/Manager
Field Geologist
Bioremedial Field Engineer
Specialization:
Spill response and assessment/remediation to closure
Environmental site assessments
Remediation systems installation and system design
General construction experience
Regulatory and data interpretation
Surveying/mapping/site plans

PROFESSIONAL HISTORY
Associated Testing Laboratories, Inc., Contract Environmental Professional/Project Manager, Sept. 2013 to present
Berg-Oliver Associates, Inc., Project Manager, November 2004 to present
BNC Environmental Svs., Inc. (successor CRA), Project Geologist/Scientist/Manager, Oct. 2001 to Nov. 2004.
Eco-Systems, Inc., Project Scientist, March 2001 to October 2001.
Self-Employed, Environmental Consultant/Scientist, November 2000 to March 2001.
Associated Environmental Consultants, Inc., Project Manager, August 1995 to November 2000.
Self-Employed, Environmental Consultant, April 1995 to August 1995.
Sybron Chemicals, Inc., Bioremedial Field Engineer, October 1993 to April 1995.

REPRESENTATIVE EXPERIENCE
Mr. Murphy is a mid to senior-level project manager with over 18 years of diverse environmental experience. Mr. Murphy's responsibilities include: project management activities, conducting surface and/or subsurface soil groundwater investigations, Phase II ESAs, Phase IIIs, Affected Property Assessment Reports (APARs), spill response and environmental management, conducting over twenty six hundred Phase I ESAs/due diligence, transaction screens, wetland projects (delineation, nationwide and individual permits), road (new and reconstruction) and infrastructure (waterlines, sanitary sewer and storm sewer) projects and other environmental-related tasks. Experience and preparation of cost proposals, project coordination, health and safety plans and supervisory duties of sub-contractors, bioremedial equipment project design/set-up, various remediation technology projects, equipment and design for treating petroleum-contaminated soil and groundwater, equipment set-up/construction, QA/QC, monitor well advancement, supervision of sampling discharge effluents and storm water, groundwater monitoring supervision, EPA/TCEQ & RRC protocol, expediting projects, treatability studies and contaminant plume mapping. He has project experience in field assessments and remediation projects for banks, developers, brokers, institutions, companies, corporations, engineering firms/government entities (city of Houston,

HCPID-AED and other cities) and the Texas Commission on Environmental Quality Leaking Petroleum Storage Tank (LPST) RPR Division. Mr. Murphy excels in the application of technical knowledge, site-specific factors, data analysis, report preparation to existing and potential clients. Knowledgeable in government environmental acts and regulations. Representative projects include:

- Performed numerous Subsurface Investigations and Phase II-Environmental Site Assessments for various clients to determine the presence or absence of adverse environmental conditions.
- Conducting spill response activities and delineations predominantly for pipeline-related enterprises and bulk storage facilities inclusive of: air monitoring, subcontractor supervision, excavation and over-excavation, sampling, waste disposal (waste profiling/characterization, transportation and disposal), reporting and closure under Railroad Commission of Texas or TCEQ. Representative clients:
  - ExxonMobil Pipeline Co. (EMPCo.)
  - BP Pipelines North America (NA), Inc.
  - Valero Logistics Operations, L.P.
  - Kinder Morgan
  - Shell Oil Products US, Equiva, Motiva and Equilon
  - TEPPCO
- Prepared a pilot project leading to a contracted waste water line build-up treatment plan, technical documents, cost proposal for the City of Houston (waste water line bioremedation).
- Conducted numerous new road, road reconstruction, waterline alignments, sanitary sewer alignments, storm sewer alignments and Limited Environmental Assessment projects for the City of Houston Public Works and Engineering Department, Harris County Public Infrastructure Department-Architecture and Engineering Division and Engineering Firms and other numerous linear projects (TxDOT (State CE, CE and support for LEAs).
- LPST remediation equipment set-up and design, petroleum contaminant reduction, TCEQ approved closure of several LPST sites and supervision of LPST sites.
- Experience in all phases of construction including bioremedial equipment installation, sampling protocol of water and/or soils, and closure of project site. Field Engineer for numerous site assessments throughout the Gulf Coast region. Construction of bioremediation systems to convert pump and treat contaminated ground water including recovery/treatment/microbe and nutrient injection systems. Projects:
  - Houston Lighting & Power-Spring Branch, Houston, bioreactor system; and
  - Wilburforce Road, Houston-First Interstate (successor Wells Fargo Bank), bioreactor.
- Field experience with soil injection, bioreactors, air strippers, and vacuum heaps and air sparging to treat soil/groundwater contaminants. Field Engineer for various remediation projects of oil and petroleum-contaminated soils. Field experience in soil vapor extraction equipment (SVE) including a specially designed bio-treated fluid separator. Constructed a vapor extraction system with a biological scrubber to extend carbon polishing efficiency and/or the potential for breakthrough or fugitive releases, and reduction of overall total emissions. System also included method to remove groundwater from vapor extraction wells, which tended to accumulate due to excessive rainfall and shallow groundwater effects. Constructed, maintained and operated landfarms for various clients. Provided technical and consulting services during the operation of the landfarm, including biological health analyses sampling, data interpretation, report presentation and closure. Other Environmental Projects:
  - Numerous due diligence assessments and affected property assessments for various clients.
  - Non-producing “old oilfield” asset assessments (Chevron Environmental Management Company and Chevron Business and Real Estate Services).

- Several States, Monitoring and assessments of natural gas compressor stations (El Paso Energy Corporation-Tennessee Gas Pipeline and Southern Natural Gas).
- Texas – Hydrostatic water treatment projects.
- Texas – Wastewater permitting and discharge analyses (Williams Energy-Williams Gas Pipeline and EMPCo.).
- Numerous crude oil and refined product spill delineations.
- Texas City, Texas – BP-Amoco pipeline release assessment affecting sanitary sewer system.
- Texas – Assessments of Shell Oil Products US and related enterprises-Equiva, Motiva and Equilon.
- Pasadena, Texas – Kinder Morgan Texas Pipeline, Assessment to evaluate off-site source of corrosion to pipeline.
- Remediation and landfarms (Chevron Environmental Management Co., First Interstate (successor Wells Fargo Bank), Kinder Morgan, Genesis Crude Oil, L.P., Valero Logistics Operations, L.P., TEPPCO, Specialty Lubricants and Commercial Metals).
- Angleton, Texas – First Interstate (successor Wells Fargo Bank), specialty soil vapor extraction system.
- Rockport and Marshall, Texas-First Interstate (successor Wells Fargo Bank), vacuum heap/augmented with automated microbial/nutrient additive system.

- Administrative duties, supervision, cost proposals, report preparation, regulatory document preparation, client project status reports. Supervision and field experience in soil boring/monitor well drilling advancement, logging, decommissioning and soil sampling criteria. Installation of numerous soil borings and groundwater monitoring wells at various sites.

- Field experience in groundwater monitoring, low flow sampling, flow interpretation, and contaminant plume mapping. Experience in a variety of mapping, site plan creation/surveying, geographic information systems, regulatory databases and land-use planning.

- Performed over twenty-six hundred Phase I Site Assessments, Categorical Exclusions and Limited Environmental Assessments for various clients including oil companies (Chevron Environmental Management Co., ChevronTexaco Business and Real Estate Services, Shell Oil Products US, Weatherford International, Inc., EMPCo., etc.) banks, lending agencies, private individuals and/or businesses and corporations, engineering firms, Texas Department of Transportation, City of Houston Department of Public Works and Engineering and Harris County Public Infrastructure Department-Architecture and Engineering Division. Performed site assessments on all types of properties and facilities including vacant and developing properties, office buildings, office/warehouses, machine shops, and industrial properties. Performed PCS PrimeCo., Sprint, NEXTEL, and American Tower Company pad site assessments. Project Budgets $2,500-$5,500: Locations: Texas, Louisiana, North Carolina, Ohio, Virginia, West Virginia.

- Performed and managed various site clean-ups (hazardous and non-hazardous materials/items). Sampling events of abandoned drums and containers with unidentified substances, laboratory supervision, obtaining waste codes, arranging pick-up by certified waste hauling enterprises and appropriate final disposal activities.

ASSOCIATIONS AND ORGANIZATIONS

The Society of Texas Environmental Professionals
National Association of Environmental Professionals