



SUPPLEMENTAL PHASE II ENVIRONMENTAL SITE ASSESSMENT

Approximately 1.77 Acres

7811 Harrisburg Boulevard

Houston, Harris County, Texas

DATE: JULY 24, 2023

PROJECT: 20-0563

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PREPARED FOR:

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ABBREVIATIONS

ASTM	American Society for Testing and Materials
bgs	below ground surface
COC	Chemical of Concern
DPT	Direct-Push Technology
ESA	Environmental Site Assessment
ESE	ESE Partners, LLC
GWBU	Groundwater Bearing Unit
mg/kg	Milligrams per Kilogram. A measure of soil COC concentration. Could also be expressed as parts per million (ppm)
mg/L	Milligrams per Liter. A measure of groundwater COC concentration. Could also be expressed as parts per million (ppm)
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionization Detector
PPL Metals	Priority Pollutant Metals
PVC	Polyvinyl Chloride – a type of plastic
PCL	Protective Concentration Level
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SVOC	Semi-Volatile Organic Compound
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TMW	Temporary Monitor Well
TPH	Total Petroleum Hydrocarbon
TRRP	Texas Risk Reduction Program
TSBC	Texas-Specific Soil Background Concentration
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

Environmental Science and Engineering Partners, LLC (ESE) has conducted a Supplemental Phase II Environmental Site Assessment (ESA) on behalf of Houston Land Bank for the property located at 7811 Harrisburg Boulevard in Houston, Harris County, Texas (the Site). This Phase II ESA was completed to supplement a Phase II ESA conducted by Tetra Tech, Inc. (Tetra Tech) dated March 22, 2023 (Tetra Tech Document No. 103P8456). The afore-referenced Phase II ESA was conducted by Tetra Tech in response to a Phase I ESA conducted by ESE Partners, LLC (ESE Partners; ESE) in September 2020 which identified the following *recognized environmental condition* (RECs) in connection with the Site:

- Historic automotive repair facility to the adjacent southwest of the Site; and
- Historic dry-cleaning facilities to the adjacent southwest and northwest of the Site.

Results of Tetra Tech's Phase II ESA reported the following initial exceedances of Texas Commission on Environmental Quality (TCEQ), Texas Risk Reduction Program (TRRP) Residential Protective Concentration Levels (PCLs):

- Methylene chloride in soil sample SB-05 (0-2)
- Barium in soil samples SB-02 (0-2) and SB-04 (0-2)
- Lead in soil samples SB-01 (0-2) and SB-03 (0-2) through SB-06 (0-2)
- Arsenic in groundwater sample TW-03

Additionally, the soil vapor sample collected by Tetra Tech in the southwest corner of the property (location closest to RECs identified in ESE's Phase I ESA) could not be analyzed by the laboratory due to water having entered the summa canister which in turn fouled the sample collection device.

The purpose of this Supplemental Phase II ESA was to further characterize certain chemicals of concern (COCs) reported in shallow soil and groundwater at the Site, as well as confirm or deny the presence of COCs in vapor beneath the southwest corner of the Site. These certain COCs included arsenic, lead, barium, and methylene chloride. This Phase II ESA was performed in general accordance with the ASTM E1903-19 guidance document titled *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

Findings

Assessment activities were conducted on June 16 and 19, 2023 and included the installation of three (3) soil borings (SBs) to depths ranging from 2 to 5 feet below ground surface (bgs), the collection of one (1) near-source soil vapor sample from a zone at approximately 5 feet bgs, and the installation of one (1) permanent monitor well to a depth of 25 feet bgs. Representative soil, soil vapor, and/or groundwater samples were collected at each soil boring location.

Soil and groundwater COC concentrations were compared to Texas-Specific Soil Background Concentrations (TSBCs) and/or Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Residential Protective Concentration Levels (PCLs; residential assessment levels) for this report. Reported COC concentrations in all soil and groundwater samples did not exceed sample detection limits (SDLs), TSBCs, and/or TCEQ TRRP Tier 1 Residential PCLs.

Reported soil gas concentrations were compared to applicable Residential Target Sub-Slab and Near-Source Gas Concentrations that were calculated using the U.S. EPA Vapor Intrusion Screening Level (VISL) Calculator (U.S. EPA, Online Version). Concentrations were calculated using the 1×10^{-5} target risk level provided in Texas regulations. The targeted COCs included a list of twelve (12) volatile organic compounds (VOCs) commonly associated with automotive fueling stations or dry cleaners. Reported COC concentrations in the soil gas samples collected did not exceed sample detection limits (SDLs) or U.S. EPA Residential Target Sub-Slab and Near-Source Gas Concentrations (Vapor Intrusion Screening Levels; VISLs).

A field duplicate (FD-01) was collected from soil boring SB-05A in the 0 to 2 feet bgs interval and analyzed for methylene chloride. The results from samples FD-01 and SB-05A (0-2) were both below Method Detection Limits (MDLs) and Sample Detection Limits (SDLs) and demonstrated a total method variance of 6.24%. This is within the 9% variance between the low-level spiked Lab Control Sample and Lab Control Sample Dup and well within published laboratory limits (see Appendix C, pp.20). Additionally, the Trip Blank was analyzed for methylene chloride and reported results were below detection limits.

Sample locations are depicted in **Figure 2**. A detailed description of observed lithology and field screening results are recorded on the Soil Boring Logs provided in **Appendix A**. Soil analytical data are presented in **Table 1A** through **Table 1B**. Groundwater analytical data are presented in **Table 2A** through **Table 2B**. Soil vapor analytical data are presented in **Table 3**.

Conclusions

The objective of this Supplemental Phase II ESA was to further characterize the following initial exceedances of TCEQ TRRP Tier 1 Residential PCLs, as reported by Tetra Tech's March 22, 2023 Phase II ESA (Tetra Tech Document No. 103P8456):

- Methylene chloride in soil sample SB-05 (0-2)
- Barium in soil samples SB-02 (0-2) and SB-04 (0-2)
- Lead in soil samples SB-01 (0-2) and SB-03 (0-2) through SB-06 (0-2)
- Arsenic in groundwater sample TW-03
- Soil gas sample collected from the southwest corner of the Site was not able to be analyzed due to a fouled sample collection device

The results of the sampling conducted during ESE's Supplemental Phase II ESA are as follows:

- ESE sample SB-05A (0-2) was collected from the same location as Tetra Tech sample SB-05 (0-2) and was analyzed for methylene chloride to address the initial exceedance reported by Tetra Tech. The methylene chloride concentration in sample SB-05A (0-2) was reported below the sample detection limit (SDL) and the TRRP Tier 1 Residential PCL. It should be noted that methylene chloride is a common laboratory contaminant and it appears that the initial exceedance was most likely the result of laboratory contamination and not representative of on-Site shallow soil characteristics. Therefore, results of the supplemental sampling demonstrate that there is no soil PCL exceedance for methylene chloride on-Site and shallow soil has been shown to be protective of residential end-use.
- By the rules pertaining to Synthetic Precipitation Leaching Procedure (SPLP) analysis, if the sample containing the highest reported concentration of a COC does not exceed the applicable TRRP Tier 1 PCL by SPLP, then all samples containing lower concentrations of the same COC are also considered to be below that TRRP Tier 1 PCL. ESE sample SB-04A (0-2) was collected from the same location as the initial sample with the highest reported concentration of barium, Tetra Tech sample SB-04 (0-2), and was analyzed for barium using SPLP. ESE sample SB-03A (0-2) was collected from the same location as the initial sample with the highest reported concentration of lead, Tetra Tech sample SB-03 (0-2), and was analyzed for lead by SPLP. Reported results for barium by SPLP in sample SB-05A (0-2) and for lead by SPLP in SB-04A (0-2) were below the applicable TRRP Tier 1 PCL. Therefore, results of the supplemental sampling demonstrate that there are no soil PCL exceedances for barium or lead on-Site and shallow soil has been shown to be protective of residential end-use.
- ESE groundwater sample MW-01 was collected from permanent monitoring well MW-01, installed in the same location as Tetra Tech's temporary monitoring well TW-03, and was analyzed for arsenic. The reported result for arsenic in sample MW-01 is below the applicable TRRP Tier 1 PCL. Therefore, results of the supplemental sampling demonstrate that there is no groundwater PCL exceedance for arsenic on-Site and groundwater has been shown to be protective of residential end-use.
- ESE soil vapor sample SGS-03 was collected from the southwestern portion of the Site, in the same location as the Tetra Tech soil vapor sample which was fouled, and was analyzed for a truncated list of twelve (12) volatile organic compounds (VOCs) which are common components of automotive fuel and other common chlorinated solvents. All reported COC concentrations in SGS-03 were below SDLs or applicable EPA Residential VISLs. Therefore, the on-Site concentrations of these compounds in soil vapor have been shown to be protective of residential end use.

Project quality control measures, including trip blank and field duplicate results, as well as laboratory quality control data, demonstrate that Data Quality Objectives were achieved in

accordance with the Quality Assurance Project Plan. Based on the findings of this Supplemental Phase II ESA, the Site is not subject to TRRP, the on-Site soil, groundwater, and soil vapor have been demonstrated to be protective of residential end-use, and further investigation does not appear to be warranted.

1 INTRODUCTION

Ms. Christa Stoneham with Houston Land Bank has requested assistance from ESE with the continued environmental assessment of the property located at 7811 Harrisburg Boulevard in Houston, Harris County, Texas (the Site) through the performance of a Supplemental Phase II ESA. The scope of work for this Supplemental Phase II ESA was detailed in ESE's proposal (ESE Document No. PROP-20-0563-002 Rev 1), dated March 28, 2023.

1.1 Purpose

The purpose of the Supplemental Phase II ESA was to further characterize certain chemicals of concern (COCs) reported in shallow soil and groundwater at the Site and to confirm or deny the presence of COCs in vapor beneath the southwest corner of the Site. The Supplemental Phase II ESA scope of work was strategically designed to supplement Tetra Tech's Phase II ESA and to determine if TRRP PCL exceedances associated with the *RECs* identified in ESE's Phase I ESA Report (ESE Document No. REP-20-0563-001 Rev 0) exist at the Site.

1.2 Limitations of Investigation

This report has been prepared in general accordance with accepted environmental methodologies referred to in ASTM E1903-19 and contains all the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

1.3 User Reliance

This Phase II Environmental Site Assessment Report was prepared for the sole use of Houston Land Bank and their respective affiliates, investors, and attorneys. No other party should rely on the information contained herein without prior written consent of ESE and Houston Land Bank.

2 BACKGROUND

Based upon the findings of ESE's Phase I ESA Report (ESE Document No. REP-20-0563-001 Rev 0), the following *RECs* were found to be associated with the Site:

- *Historic automotive repair facility to the adjacent southwest of the Site; and*
- *Historic dry-cleaning facilities to the adjacent southwest and northwest of the Site.*

In response to the findings of the Phase I ESA, a Phase II ESA was conducted by Tetra Tech, Inc. (Tetra Tech), report dated March 22, 2023 (Tetra Tech Document No. 103P8456), to confirm or deny the presence of these COCs in soil and shallow groundwater at the Site.

Tetra Tech's Phase II ESA scope of work included collection of soil samples from six (6) soil borings distributed across the Site, collection of five (5) soil gas samples, and collection of one (1) groundwater sample from a temporary monitor well located in the southwest corner of the property. Collected soil and groundwater samples were analyzed for Volatile Organic Compounds (VOCs), Semivolatile Organic Compounds (SVOCs), Target Analyte List (TAL) metals, and TPH. Soil gas samples were analyzed for VOCs by EPA Method Toxic Organics (TO)-15. Results of Tetra Tech's Phase II ESA reported the following initial exceedances of Texas Commission on Environmental Quality (TCEQ), Texas Risk Reduction Program (TRRP) Residential Protective Concentration Levels (PCLs).

- Methylene chloride in soil sample SB-05 (0-2)
- Barium in soil samples SB-02 (0-2) and SB-04 (0-2)
- Lead in soil samples SB-01 (0-2) and SB-03 (0-2) through SB-06 (0-2)
- Arsenic in groundwater sample TW-03

Additionally, the soil vapor sample collected by Tetra Tech in the southwest corner of the property (location closest to RECs identified in ESE's Phase I ESA) could not be analyzed by the laboratory due to water having entered the summa canister which in turn fouled the sample collection device.

ESE proposed a scope of work for a Supplemental Phase II ESA to further characterize certain chemicals of concern (COCs) reported in shallow soil and groundwater at the Site, as well as confirm or deny the presence of COCs in vapor beneath the southwest corner of the Site.

2.1 General Site Setting

The Site is comprised of approximately 1.77 Acres of undeveloped land located at 7811 Harrisburg Boulevard in Houston, Harris County, Texas. The Site location is depicted in **Figure 1**.

2.2 Historical Use of the Site

The Site was developed for single-family residential and commercial use from at least 1929 until being redeveloped for sole commercial use in the 1970s. The Site was recently razed and is currently undeveloped land.

3 PHASE II ESA FIELD ACTIVITIES

ESE initiated a Supplemental Phase II ESA to address the results of Tetra Tech's March 22, 2023 Phase II ESA, which reported the following initial exceedances of TCEQ TRRP Residential PCLs:

- Methylene chloride in soil sample SB-05 (0-2)
- Barium in soil samples SB-02 (0-2) and SB-04 (0-2)
- Lead in soil samples SB-01 (0-2) and SB-03 (0-2) through SB-06 (0-2)
- Arsenic in groundwater sample TW-03

Additionally, the soil vapor sample collected by Tetra Tech in the southwest corner of the property (location closest to RECs identified in ESE's Phase I ESA) could not be analyzed by the laboratory due to water having entered the summa canister which in turn fouled the sample collection device.

ESE's Supplemental Phase II ESA was initiated to address these certain COCs, including arsenic in groundwater, lead, barium, and methylene chloride in soil, and twelve (12) compounds which are common components of automotive fuel and other common chlorinated solvents in soil vapor. Assessment activities were conducted on June 16 and 19, 2023 and included the installation of three (3) soil borings to a depths ranging from 2 to 5 feet bgs, the collection of one (1) soil vapor sample from a zone approximately 5 feet bgs, and the installation of one (1) permanent monitor well to a depth of 25 feet bgs. Details of the field methodologies and laboratory analytical results are provided in the following sections.

3.1 Field Methodologies

Safety

A detailed Health and Safety Plan (HASP) (ESE Document No. REP 20-0563-004 Rev 0) was included as Appendix I in the previously submitted Quality Assurance Project Plan (QAPP) (ESE Document No. REP 20-0563-002 Rev 3). This detailed HASP was followed during the field efforts conducted on June 16 and 19, 2023 and tail gate meetings were conducted during each field effort, as appropriate.

Quality Assurance / Quality Control

A field duplicate soil sample (FD-01) was collected from soil boring SB-05A in the 0-2 feet bgs interval and analyzed for the same chemical of concern (methylene chloride) as soil sample SB-05A (0-2). The Trip Blank was also analyzed for methylene chloride.

Soil

On June 16, 2023, ESE installed three (3) soil borings in accordance with the locations of the reported RAL exceedances in samples collected from soil borings installed during the March 22,

2023 Phase II ESA conducted by Tetra Tech (Tetra Tech Document No. 103P8456). ESE Soil borings SB-03A through SB-05A were installed in the locations of Tetra Tech soil borings SB-03 through SB-05, with the ESE boring numbers corresponding directly to Tetra Tech boring numbers (i.e., ESE boring SB-03A is collocated with Tetra Tech boring SB-03). Soil borings were advanced to depths ranging from 2 to 5 bgs using direct push technology (DPT). Soil samples collected from the borings were visually inspected for signs of impact, field-screened with a photo-ionization detector (PID), and the lithology was logged. Signs of impact and elevated PID concentrations (>20 ppmv) were not observed in any of the soil screened at the Site. Soil boring locations are depicted in **Figure 2**. Observed lithology and field screening results are recorded on the Soil Boring Logs provided in **Appendix A**.

Soil samples were selectively submitted for laboratory analysis of SPLP barium and lead by EPA Method 1312 and methylene chloride by EPA Method 8260. Soil samples submitted for laboratory analysis are summarized in **Table 3.1.1** below:

Table 3.1.1
Summary of Soil Sample Analysis

Soil Boring Location	Sample Depth Interval (ft bgs)	PID Concentration	Laboratory Analysis
SB-03A	0-2	2.3	SPLP Lead
SB-04A	0-2	0.1	SPLP Barium
SB-05A (FD-01)	0-2	0.3	Methylene chloride

Soil Gas

Soil boring SB-03A (installed in the location of Tetra Tech boring SB-03) was advanced to a depth of 5 feet bgs and converted to SGS-03 for the collection of a near-source soil-gas sample from a zone approximately 5 feet bgs. Soil-gas was collected utilizing a 1-liter Summa canister (stainless steel container) with attached 30-minute flow regulator. The soil-gas sample was subsequently analyzed for a truncated list of volatile organic compounds (VOCs) using gas chromatography (GC)/mass spectrometry (MS) following methodology detailed by the U.S. EPA Compendium Method TO-15. The soil gas analysis was a truncated list of approximately twelve (12) compounds which are common components of automotive fuel and other common chlorinated solvents.

Groundwater

A permanent monitor well, MW-01, was installed to a depth of 25 feet bgs in the location of SB-03A/SGS-03 (Tetra Tech boring location SB-03/TW-03) for the collection of groundwater. MW-01 was constructed with 2-inch diameter Schedule 40 PVC riser and slotted screen, was screened across the shallow GWBU initially encountered at 14 feet bgs and was terminated at a depth of approximately 25 feet bgs. Monitor well construction details are depicted on the Soil Boring Logs provided in **Appendix A**.

Following completion, MW-01 was purged through a mechanical withdrawal of water to improve the communication between the well and the shallow GWBU. This process serves to remove sand, silt, and/or clay particles that may have been introduced into the well bore during installation activities. On June 19, 2023, approximately 72 hours after development, MW-01 was sampled with a peristaltic pump using low-flow methods and disposable tubing. All non-disposable equipment was decontaminated between sampling locations with an Alconox® and distilled water solution followed by a final rinse with distilled water.

The groundwater sample was analyzed for arsenic by EPA Method 6020. A copy of the low-flow stabilization sheet is included in **Appendix B**.

All soil and groundwater samples were placed in clean, laboratory-supplied containers, labeled, and placed in an ice-filled cooler pending transportation to Eurofins Laboratories. All soil vapor samples were properly containerized in 1 liter summa canisters and transported to Enthalpy Laboratories for analysis. Proper chain-of-custody documentation was maintained for all transported samples.

3.2 Investigation Results

Soil and groundwater COC concentrations were compared to Texas-Specific Soil Background Concentrations (TSBCs) and/or Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Residential Protective Concentration Levels (PCLs; Residential Assessment Levels). According to reported analytical results, COC concentrations in all soil and groundwater samples collected at the Site did not exceed SDLs, TSBCs, and/or critical TCEQ TRRP Tier 1 Residential PCLs.

Reported soil gas concentrations were compared to applicable Residential Target Sub-Slab and Near-Source Gas Concentrations that were calculated using the U.S. EPA Vapor Intrusion Screening Level (VISL) Calculator (U.S. EPA, Online Version). Concentrations were calculated using the 1×10^{-5} target risk level provided in Texas regulations. The targeted COCs included a list of twelve (12) volatile organic compounds (VOCs) commonly associated with automotive fueling stations or dry cleaners. Reported COC concentrations in the soil gas sample collected did not exceed sample detection limits (SDLs) or U.S. EPA Residential Target Sub-Slab and Near-Source Gas Concentrations.

A summary of all soil analytical data is presented in **Table 1A** through **Table 1B**. A summary of all groundwater analytical data is presented in **Table 2A** and **Table 2B**. A summary of all soil gas data is presented in **Table 3**. Copies of laboratory analytical reports are included in **Appendix C**.

3.3 Investigation Derived Waste

No investigation derived waste was generated during this Phase II ESA.

4 FINDINGS AND CONCLUSIONS

Environmental Science and Engineering Partners, LLC (ESE) has conducted a Supplemental Phase II Environmental Site Assessment (ESA) on behalf of Houston Land Bank for the property located at 7811 Harrisburg Boulevard in Houston, Harris County, Texas (the Site). This Phase II ESA was completed to supplement a Phase II ESA conducted by Tetra Tech, Inc. (Tetra Tech) dated March 22, 2023 (Tetra Tech Document No. 103P8456). The afore-referenced Phase II ESA was conducted by Tetra Tech in response to a Phase I ESA conducted by ESE Partners, LLC (ESE Partners; ESE) in September 2020 which identified the following *recognized environmental condition* (RECs) in connection with the Site:

- Historic automotive repair facility to the adjacent southwest of the Site; and
- Historic dry-cleaning facilities to the adjacent southwest and northwest of the Site.

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- Arsenic in groundwater sample TW-03

Additionally, the soil vapor sample collected by Tetra Tech in the southwest corner of the property (location closest to RECs identified in ESE's Phase I ESA) could not be analyzed by the laboratory due to water having entered the summa canister which in turn fouled the sample collection device.

The purpose of this Supplemental Phase II ESA was to further characterize certain chemicals of concern (COCs) reported in shallow soil and groundwater at the Site, as well as confirm or deny the presence of COCs in vapor beneath the southwest corner of the Site. These certain COCs included arsenic, lead, barium, and methylene chloride. This Phase II ESA was performed in general accordance with the ASTM E1903-19 guidance document titled *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

4.1 Findings

Assessment activities were conducted on June 16 and 19, 2023 and included the installation of three (3) soil borings (SBs) to depths ranging from 2 to 5 feet below ground surface (bgs), the collection of one (1) near-source soil vapor sample from a zone at approximately 5 feet bgs, and the installation of one (1) permanent monitor well to a depth of 25 feet bgs. Representative soil, soil vapor, and/or groundwater samples were collected at each soil boring location.

Soil and groundwater COC concentrations were compared to Texas-Specific Soil Background Concentrations (TSBCs) and/or Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Residential Protective Concentration Levels (PCLs; residential assessment levels) for this report. Reported COC concentrations in all soil and groundwater samples did not exceed sample detection limits (SDLs), TSBCs, and/or TCEQ TRRP Tier 1 Residential PCLs.

Reported soil gas concentrations were compared to applicable Residential Target Sub-Slab and Near-Source Gas Concentrations that were calculated using the U.S. EPA Vapor Intrusion Screening Level (VISL) Calculator (U.S. EPA, Online Version). Concentrations were calculated using the 1×10^{-5} target risk level provided in Texas regulations. The targeted COCs included a list of twelve (12) volatile organic compounds (VOCs) commonly associated with automotive fueling stations or dry cleaners. Reported COC concentrations in the soil gas samples collected did not exceed sample detection limits (SDLs) or U.S. EPA Residential Target Sub-Slab and Near-Source Gas Concentrations (Vapor Intrusion Screening Levels; VISLs).

A field duplicate (FD-01) was collected from soil boring SB-05A in the 0 to 2 feet bgs interval and analyzed for methylene chloride. The results from samples FD-01 and SB-05A (0-2) were both below Method Detection Limits (MDLs) and Sample Detection Limits (SDLs) and demonstrated a total method variance of 6.24%. This is within the 9% variance between the low-level spiked Lab Control Sample and Lab Control Sample Dup and well within published laboratory limits (see Appendix C, pp.20). Additionally, the Trip Blank was analyzed for methylene chloride and reported results were below detection limits.

Sample locations are depicted in **Figure 2**. A detailed description of observed lithology and field screening results are recorded on the Soil Boring Logs provided in **Appendix A**. Soil analytical data are presented in **Table 1A** through **Table 1B**. Groundwater analytical data are presented in **Table 2A** through **Table 2B**. Soil vapor analytical data are presented in **Table 3**.

4.2 Conclusions

The objective of this Supplemental Phase II ESA was to further characterize the following initial exceedances of TCEQ TRRP Tier 1 Residential PCLs, as reported by Tetra Tech's March 22, 2023 Phase II ESA (Tetra Tech Document No. 103P8456):

- Methylene chloride in soil sample SB-05 (0-2)
- Barium in soil samples SB-02 (0-2) and SB-04 (0-2)
- Lead in soil samples SB-01 (0-2) and SB-03 (0-2) through SB-06 (0-2)
- Arsenic in groundwater sample TW-03
- Soil gas sample collected from the southwest corner of the Site was not able to be analyzed due to a fouled sample collection device

The results of the sampling conducted during ESE's Supplemental Phase II ESA are as follows:

- ESE sample SB-05A (0-2) was collected from the same location as Tetra Tech sample SB-05 (0-2) and was analyzed for methylene chloride to address the initial exceedance reported by Tetra Tech. The methylene chloride concentration in sample SB-05A (0-2) was reported below the sample detection limit (SDL) and the TRRP Tier 1 Residential PCL. It should be noted that methylene chloride is a common laboratory contaminant and it appears that the initial exceedance was most likely the result of laboratory contamination and not representative of on-Site shallow soil characteristics. Therefore, results of the supplemental sampling demonstrate that there is no soil PCL exceedance for methylene chloride on-Site and shallow soil has been shown to be protective of residential end-use.
- By the rules pertaining to Synthetic Precipitation Leaching Procedure (SPLP) analysis, if the sample containing the highest reported concentration of a COC does not exceed the applicable TRRP Tier 1 PCL by SPLP, then all samples containing lower concentrations of the same COC are also considered to be below that TRRP Tier 1 PCL. ESE sample SB-04A (0-2) was collected from the same location as the initial sample with the highest reported concentration of barium, Tetra Tech sample SB-04 (0-2), and was analyzed for barium using SPLP. ESE sample SB-03A (0-2) was collected from the same location as the initial sample with the highest reported concentration of lead, Tetra Tech sample SB-03 (0-2), and was analyzed for lead by SPLP. Reported results for barium by SPLP in sample SB-05A (0-2) and for lead by SPLP in SB-04A (0-2) were below the applicable TRRP Tier 1 PCL. Therefore, results of the supplemental sampling demonstrate that there are no soil PCL exceedances for barium or lead on-Site and shallow soil has been shown to be protective of residential end-use.
- ESE groundwater sample MW-01 was collected from permanent monitoring well MW-01, installed in the same location as Tetra Tech's temporary monitoring well TW-03, and was analyzed for arsenic. The reported result for arsenic in sample MW-01 is below the applicable TRRP Tier 1 PCL. Therefore, results of the supplemental sampling demonstrate that there is no groundwater PCL exceedance for arsenic on-Site and groundwater has been shown to be protective of residential end-use.
- ESE soil vapor sample SGS-03 was collected from the southwestern portion of the Site, in the same location as the Tetra Tech soil vapor sample which was fouled, and was analyzed for a truncated list of twelve (12) volatile organic compounds (VOCs) which are common components of automotive fuel and other common chlorinated solvents. All reported COC concentrations in SGS-03 were below SDLs or applicable EPA Residential VISLs. Therefore, the on-Site concentrations of these compounds in soil vapor have been shown to be protective of residential end use.

Project quality control measures, including trip blank and field duplicate results, as well as laboratory quality control data, demonstrate that Data Quality Objectives were achieved in

accordance with the Quality Assurance Project Plan. Based on the findings of this Supplemental Phase II ESA, the Site is not subject to TRRP, the on-Site soil, groundwater, and soil vapor have been demonstrated to be protective of residential end-use, and further investigation does not appear to be warranted.

5 REFERENCES

ESE does not warrant the data of regulatory agencies or other third parties supplying information used in the preparation of this report. Documents and commercial information services used in the preparation of this report, as listed below, are all current as most recently published.

DOCUMENTS

American Society for Testing and Materials, ASTM E1903-19, Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

ESE Partners, LLC. *Phase I Environmental Site Assessment. Approximately 1.77 Acres. 7811 Harrisburg Boulevard, Houston, Harris County, Texas.* ESE Document No. REP-20-0563-001. September 1, 2020.

ESE Partners, LLC. *Quality Assurance Project Plan for Phase II Environmental Site Assessment. Approximately 1.77 Acres. 7811 Harrisburg Boulevard, Houston, Harris County, Texas.* ESE Document No. REP-20-0563-002 Rev 3. May 17, 2023.

30 TAC 350, Texas Risk Reduction Program.

6 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

SUPPLEMENTAL PHASE II ENVIRONMENTAL SITE ASSESSMENT

APPROXIMATELY 1.77 ACRES

7811 HARRISBURG BOULEVARD

HOUSTON, HARRIS COUNTY, TEXAS

JULY 24, 2023



Colton Barr

Staff Environmental Geologist



Tim O'Neil, P.E.

Principal Engineer

FIGURES



TABLES

**TABLE 1A
SOIL VOC DATA
7811 HARRISBURG BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS**

Sample Identification:	CAS Number	Tier 1 Residential PCLs		Tier 1 Commercial/Industrial PCLs		RAL	SB-05A	FD-01
Sample Depth Interval (ft-bgs):							0-2	-
Lab Sample ID:							860-51389-4	860-51389-5
Sample Collection Date:							06/16/2023	06/16/2023
Volatile Organic Compounds (VOCs) by EPA Method 8260B		Tot ^{Soil} Comb	GW ^{Soil} Ing	Tot ^{Soil} Comb	GW ^{Soil} Ing		Results (mg/kg) Q	Results (mg/kg) Q
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
Methylene chloride	75-09-2	1600	0.013	12000	0.013	0.013	<0.00834	<0.00782

Notes:

ft-bgs - feet below ground surface

^{Tot}Soil_{Comb} PCL - TRRP Tier 1 PCL for COC exposure through a combination of soil ingestion, dermal contact, inhalation, and vegetation consumption

^{GW}Soil_{Ing} PCL - TRRP Tier 1 PCL for a soil COC leaching into groundwater that could be ingested

RAL - Residential assessment level (critical PCL)

< - Analyte concentration reported below sample detection limit (non-detect)

J - Analyte concentration reported above sample detection limit but below method quantitation limit (estimate)

Bold Highlighted Text Indicates Critical PCL Exceedance

**TABLE 1B
SOIL SPLP DATA
7811 HARRISBURG BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS**

Sample Identification:	CAS Number	Tier I Residential ^{GW} GW _{ing} PCL	Tier I Commercial/I ndustrial ^{GW} GW _{ing} PCL	<i>Critical PCL</i>	SB-03A	SB-04A
Sample Depth Interval (ft-bgs):					0-2	0-2
Lab Sample ID:					860-51389-2	860-51389-3
Sample Collection Date:					06/16/2023	06/16/2023
SPLP Metals by EPA Method 1312		mg/L	mg/L		Result mg/L Q	Result mg/L Q
Barium	7440-39-3	2	2	2	-	0.0247
Lead	7439-92-1	0.015	0.015	0.015	0.00856 J	-

Notes:

NE - Not Established

<: Analyte not detected above sample detection limit

J - Analyte detected above sample quantitation limit but below method quantitation limit

^{GW}GW_{ing} PCL: TRRP Tier 1 PCL for ingestion of COCs in Class 1 or 2 groundwater sources

Bold Highlighted Text Indicates Critical PCL Exceedance

TABLE 2A
WATER VOC DATA
7811 HARRISBURG BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS

Sample Identification:	CAS Number	Tier 1 Residential PCLs		Tier 1 Commercial/Industrial PCLs		RAL	Trip Blank
Lab Sample ID:		GW ^{GW} _{Ing}	Air ^{GW} _{Inh-V}	GW ^{GW} _{Ing}	Air ^{GW} _{Inh-V}		860-51389-1
Sample Collection Date:							06/16/2023
Volatile Organic Compounds (VOCs) by EPA Method 8260		mg/L	mg/L	mg/L	mg/L	mg/L	Results (mg/L) Q
Methylene chloride		75-09-2	0.005	21000	0.005	36000	0.005

Notes:

RAL - Residential assessment level (critical PCL)

^{Air}GW_{Inh-V} PCL - TRRP Tier 1 PCL for inhalation of volatile COCs from Class 1, 2, or 3 groundwater sources

^{GW}GW_{Ing} PCL - TRRP Tier 1 PCL for ingestion of COCs in Class 1 or 2 groundwater sources

< - Analyte concentration reported below sample detection limit (non-detect)

J - Analyte concentration reported above sample detection limit but below method quantitation limit (estimate)

Bold Highlighted Text Indicates Critical PCL Exceedance

TABLE 2B
GROUNDWATER METALS DATA
7811 HARRISBURG BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS

Sample Identification:	CAS Number	Tier 1 Residential PCLs		Tier 1 Commercial/Industrial PCLs		RAL	MW-01	
Lab Sample ID:		GW _{GW_{Ing}}	Air _{GW_{Inh-V}}	GW _{GW_{Ing}}	Air _{GW_{Inh-V}}		860-51544-1	
Sample Collection Date:							06/19/2023	
RCRA 8 Metals by EPA Method 6020A		mg/L	mg/L	mg/L	mg/L		mg/L	Results (mg/L) Q
Arsenic	7440-38-2	0.01	—	0.01	—	0.01	0.00148 J	

Notes:

RAL - Residential assessment level (critical PCL)

^{Air}GW_{Inh-V} PCL - TRRP Tier 1 PCL for inhalation of volatile COCs from Class 1, 2, or 3 groundwater sources

^{GW}GW_{Ing} PCL - TRRP Tier 1 PCL for ingestion of COCs in Class 1 or 2 groundwater sources

< - Analyte concentration reported below sample detection limit (non-detect)

J - Analyte concentration reported above sample detection limit but below method quantitation limit (estimate)

Bold Highlighted Text Indicates Critical PCL Exceedance

TABLE 3
SOIL GAS DATA
7811 HARRISBURG BOULEVARD
HOUSTON, HARRIS COUNTY, TEXAS

Sample Identification:	CAS Number	Target Sub-Slab and Near-Source Gas Concentration*		SGS-03
Sample Depth (ft-bgs):				5
Lab Sample ID:				100240-001
Sample Collection Date:		Residential	Commercial	6/16/2023
Volatile Organic Compounds by Method TO-15		ug/m ³	ug/m ³	Results (ug/m ³) Q
Benzene	71-43-2	120	524	1.8
1,1-Dichloroethene	75-35-4	6950	29200	<1.1
cis-1,2-Dichloroethene	156-59-2	1390	5840	<1.2
trans-1,2-Dichloroethene	156-60-5	1390	5840	<1.2
Ethylbenzene	100-41-4	374	1670	2.4
MTBE	1634-04-4	3600	15700	<1.1
Naphthalene	91-20-3	27.5	120	<5.2
Tetrachloroethylene	127-18-4	1390	5840	<1.9
Toluene	108-88-3	174000	730000	3.6
Trichloroethylene	79-01-6	69.5	292	<1.5
Vinyl Chloride	75-01-4	55.9	929	<0.74
m&p-Xylene	1330-20-7	3480	14600	6.7
o-Xylene	95-47-6	3480	14600	2.4

Notes:

NE - Not Established

ft-bgs: feet below ground surface

Bold Highlighted Text Indicates Target Concentration Exceedance

*Calculated at a Target Risk of 1.00E-5 using Vapor Intrusion Screening Level (VISL) Calculator

APPENDIX A

SOIL BORING LOGS



PROJECT: **7811 Harrisburg
Houston, Harris County, Texas**

Log of Well No. SB-03A

BORING LOCATION: LATITUDE: **29.730842** LONGITUDE: **-95.285902**

DRILLING CONTRACTOR: **Mathers Environmental Drilling, Inc**

DRILLING METHOD: **Direct-push technology**

CASING/SCREEN TYPE: **N/A**

SCREEN SLOT SIZE: **N/A**

CASING INTERVAL (ft): **N/A**

SCREEN INTERVAL (ft): **N/A**

APPROVED BY: **Aaron Munsart**

LOGGED BY: **Colton Barr**

DATE INITIATED:
06/16/2023

DATE COMPLETED:
06/16/2023

TOTAL DEPTH (ft): **5**

DEPTH TO
WATER:

STATIC:
N/A

INITIAL:
N/A

BORING DIAMETER:
2.25"

SCREEN/CASING
DIAMETER: **N/A**

GROUND
SURFACE
ELEVATION (ft): **N/A**

TOC ELEVATION (ft): **N/A**



DEPTH (feet)	SAMPLES			PID Reading	SURFACE COMPLETION: None	DRUMS (SO/GW): 0/0	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL INSTALLATION DETAILS	GWL
	Sample No.	Sample Rec. (%)							
0								Not Applicable	N/A
	SB-03A			2.3					
	(0-2)								
2									
			40				Topsoil, mixed black sandy clay, soft, some mixed gravel		
				NS					
4									
				NS					

Boring terminated at 5 feet bgs.

Legends/Notes:

Soil Stratigraphy

 Topsoil



PROJECT: **7811 Harrisburg
Houston, Harris County, Texas**

BORING LOCATION: LATITUDE: **29.73079** LONGITUDE: **-95.285479**

Log of Well No. **SB-04A**

DATE INITIATED:
06/16/2023

DATE COMPLETED:
06/16/2023



DRILLING CONTRACTOR: **Mathers Environmental Drilling, Inc**

DRILLING METHOD: **Direct-push technology**

CASING/SCREEN TYPE: **N/A** SCREEN SLOT SIZE: **N/A**

CASING INTERVAL (ft): **N/A** SCREEN INTERVAL (ft): **N/A**

APPROVED BY: **Aaron Munsart** LOGGED BY: **Colton Barr**

TOTAL DEPTH (ft): **5**

DEPTH TO WATER: STATIC: **N/A**
INITIAL: **N/A**

BORING DIAMETER: **2.25"**

SCREEN/CASING DIAMETER: **N/A**

GROUND SURFACE ELEVATION (ft): **N/A**
TOC ELEVATION (ft): **N/A**

DEPTH (feet)	SAMPLES			PID Reading	SURFACE COMPLETION: None DRUMS (SO/GW): 0/0 DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.
	Sample No.	Sample Rec. (%)			
0	SB-04A (0-2)		60	0.1	CLAY (CL): Clay, black, loose, dry, mixed sand and roots
2				0.3	
4				0.3	

Boring terminated at 5 feet bgs.

WELL INSTALLATION
DETAILS
Not
Applicable

GWL
N/A

Legends/Notes:

Soil Stratigraphy



Clay



PROJECT: **7811 Harrisburg
Houston, Harris County, Texas**

BORING LOCATION: LATITUDE: **29.73097** LONGITUDE: **-95.285307**

Log of Well No. **SB-05A**

DRILLING CONTRACTOR: **Mathers Environmental Drilling, Inc**

DRILLING METHOD: **Direct-push technology**

CASING/SCREEN TYPE: **N/A** SCREEN SLOT SIZE: **N/A**

CASING INTERVAL (ft): **N/A** SCREEN INTERVAL (ft): **N/A**

APPROVED BY: **Aaron Munsart** LOGGED BY: **Colton Barr**

DATE INITIATED:
06/16/2023

DATE COMPLETED:
06/16/2023

TOTAL DEPTH (ft): **5**

DEPTH TO
WATER: STATIC:
N/A
INITIAL:
N/A

BORING DIAMETER:
2.25"

SCREEN/CASING
DIAMETER: **N/A**

GROUND
SURFACE
ELEVATION (ft): **N/A**

TOC ELEVATION (ft): **N/A**



WELL INSTALLATION
DETAILS

GWL

Not
Applicable

N/A

DEPTH (feet)	SAMPLES			PID Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.
	Sample No.	Sample Rec. (%)			
0					
	SB-05A			0.3	
	(0-2)				
2					
			50		
				0.1	
4					
				0.0	

Boring terminated at 5 feet bgs.

Legends/Notes:

Soil Stratigraphy



Sandy Clay



PROJECT: **7811 Harrisburg
Houston, Harris County, Texas**

Log of Well No. MW-01

BORING LOCATION: LATITUDE: LONGITUDE:
DRILLING CONTRACTOR: **Mathers Environmental Drilling, Inc**

DATE INITIATED:
06/16/2023

DATE COMPLETED:
06/16/2023

TOTAL DEPTH (ft): **25**

DRILLING METHOD: **Hollow Stem Auger**

DEPTH TO WATER:
(ft) STATIC: **13.18**
INITIAL: **14**

CASING/SCREEN TYPE: **SCH 40 PVC** SCREEN SLOT SIZE: **0.01"**

CASING INTERVAL (ft): **0-10**

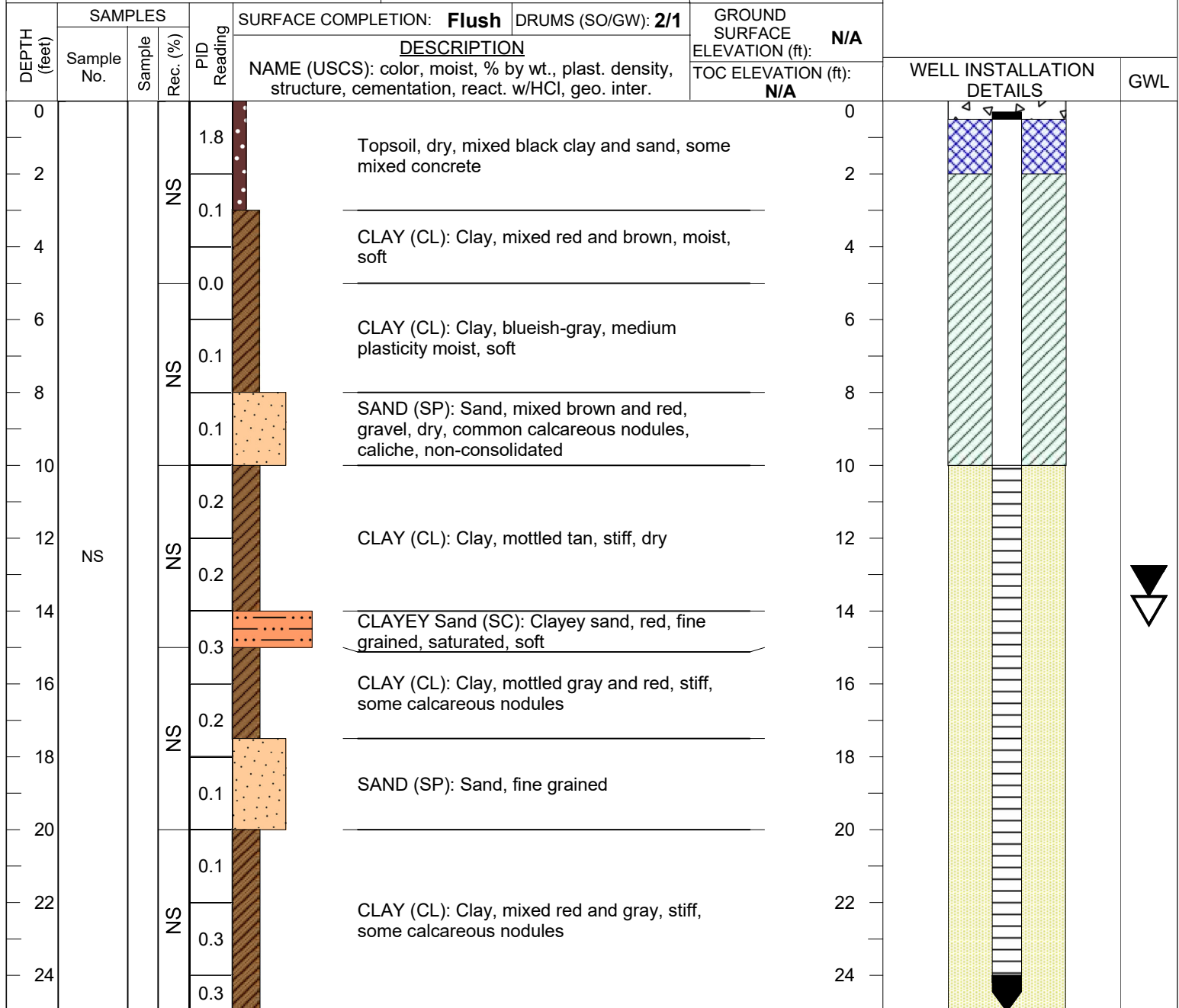
SCREEN INTERVAL (ft): **10-25**

BORING DIAMETER:
2.25"

APPROVED BY: **Aaron Munsart**

LOGGED BY: **Colton Barr**

SCREEN/CASING DIAMETER: **2.00"**



Boring terminated at 25 feet bgs.

Legends/Notes:

Soil Stratigraphy				Well Construction Details				Depth to Water (GWL)					
	Topsoil		Sand		Fill		Bentonite		Cover		Screen		Static
	Clay		Clayey Sand		Cement		Sand		Casing		End Cap		Initial

APPENDIX B

LOW FLOW STABILIZATION SHEET

Low-Flow Groundwater Sampling Log

Project: 7811 Harrisburg Boulevard
Project No.: 20-0563
Site Location: 7811 Harrisburg Boulevard, Houston, Texas
Monitor Well No.: MW-01
Date Purged: 6/19/2023 **Sampled By:** Colton Barr

MONITOR WELL INFORMATION

Total Depth of Minotor Well (TD): 24.6 ft.
 Static Depth of Groundwater (DTW): 13.18 ft.
 Screen Length (SL) from Boring Logs: 15 ft.
 Depth to Top of Well Screen (TD-SL): 9.6 ft.
 Height of Water Column (H=TD-DTW): 11.42 ft.

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.86 gal. (1 well volume) 5.58 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) gal. (1 well volume) gal. (3 well volumes)
 Other (Specify Diameter)⁴ gal. (1 well volume) gal. (3 well volumes)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☒ Dedicated ☐ Disposal
☐ Other (Specify)

LOW-FLOW MONITORING PARAMETERS

Time	Volume Purged	*Temp.	Specific Conductivity	Dissolved Oxygen	*pH	Turbidity	DTW	*ORP
hr/min	L (cumulative)	°C	mS/cm	mg/L	-	NTU or FTU	ft	mV
Target: 5 min	Not Established	+/- 3%	+/- 3%	+/- 10%	+/- 0.1%	+/- 10% (if > 5 NTU)	<0.3 ft or Top of Screen	+/- 10 mV
1028	0	27.08	1.26	5.29	7.3	19.73	13.40	162.9
1031	0.72	25.18	1.28	2.84	7.3	13.37	13.54	156.8
1034	1.44	25.53	1.28	2.72	7.31	13.01	13.50	153.4
1037	2.16	25.51	1.28	2.65	7.32	14.73	13.51	150
1040	2.88	25.5	1.28	2.68	7.34	12.34	13.53	147
1043	3.6	25.73	1.28	2.73	7.33	9.85	13.52	145.6
1046	4.32	25.68	1.28	2.86	7.34	15.77	13.52	143.9
1049	5.04	25.78	1.28	2.87	7.32	12.28	13.50	143.2
1052	5.76	25.86	1.28	2.84	7.32	30.6	13.50	141.4
1055	6.48	25.75	1.28	2.76	7.34	12.33	13.50	140.2
1058	7.2	25.76	1.28	2.77	7.33	12.83	13.51	139.2
1101	7.92	25.67	1.29	2.89	7.31	14.43	13.53	138.5
1104	8.64	25.83	1.29	3.05	7.3	15.63	13.51	137.8
1107	9.36	26.16	1.28	2.88	7.32	16.73	13.50	136.1
1110	10.08	26.16	1.29	2.99	7.3	17.68	13.48	136.2
1113	10.8	26.12	1.29	2.88	7.31	18.32	13.48	135.3

Notes: 1. Well is stable if 3 consecutive measurements of all indicators are within their target ranges.

2. Per EPA & TCEQ guidance: temperature, ORP, and pH should not always be considered for stabilization requirements.

3. Low-flow target purge rate is 0.1 to 0.5 liters/min (0.026 to 0.132 gpm)

4. Well Volume Calculation: H x Well Diameter² x 0.0408 = 1 well volume

Purge Flow Rate 0.0625 gpm 0.24 liter/min (3.8 x gpm)
 Volume Purged 2.8421 gal. 10.8 liters
 Date/Time of Sample Collection 6/19/2023 Date 1115 Time
 SHEET 1 OF 1

APPENDIX C

LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

PREPARED FOR

Attn: Tim O'Neil
ESE Partners
2002 West Grand Parkway North
Suite 140
Katy, Texas 77449

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JOB DESCRIPTION

7811 Harrisburg
SDG NUMBER 20-0563

JOB NUMBER

860-51389-1

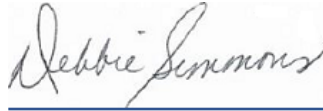
Eurofins Houston

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization



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Authorized for release by
Debbie Simmons, Project Manager
Debbie.Simmons@et.eurofinsus.com
(832)986-6768

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Definitions/Glossary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.

Metals

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
U	Analyte was not detected at or above the SDL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

DCS Summary

692477

Analytical Method: VOCs by SW-846 8260C

Matrix: Soil

Prep Method: SW5035A

Laboratory: Xenco - Houston

Parameter	SDL	MQL	Spike Amount	Actual Amount	Units
Benzene	0.000207	0.00100	0.00100	0.00104	mg/kg
Bromobenzene	0.000346	0.00500	0.00100	0.00104	mg/kg
Bromochloromethane	0.000526	0.00500	0.00100	0.000960	mg/kg
Bromodichloromethane	0.000251	0.00500	0.00100	0.000830	mg/kg
Bromoform	0.00103	0.00500	0.00500	0.00473	mg/kg
Methyl bromide	0.000943	0.00500	0.00100	0.00107	mg/kg
2-Butanone	0.00365	0.0200	0.00500	0.00572	mg/kg
tert-Butylbenzene	0.00128	0.00500	0.00500	0.00533	mg/kg
Sec-Butylbenzene	0.000261	0.00500	0.00100	0.000880	mg/kg
n-Butylbenzene	0.000274	0.00500	0.00100	0.000860	mg/kg
Carbon Tetrachloride	0.00164	0.00500	0.00500	0.00402	mg/kg
Chlorobenzene	0.000237	0.00500	0.00100	0.00109	mg/kg
Chloroethane	0.000444	0.0100	0.00100	0.00111	mg/kg
Chloroform	0.000173	0.00500	0.00100	0.000970	mg/kg
Methyl Chloride	0.000431	0.00500	0.00100	0.00121	mg/kg
2-Chlorotoluene	0.000342	0.00500	0.00100	0.00108	mg/kg
4-Chlorotoluene	0.000264	0.00500	0.00100	0.00105	mg/kg
p-Cymene (p-Isopropyl	0.000319	0.00500	0.00100	0.000870	mg/kg
1,2-Dibromo-3-Chlorop	0.000704	0.00500	0.00100	0.00110	mg/kg
Dibromochloromethane	0.000895	0.00500	0.00100	0.00299	mg/kg
1,2-Dibromoethane	0.00104	0.00500	0.00500	0.00455	mg/kg
Methylene Bromide	0.000371	0.00500	0.00100	0.00107	mg/kg
1,2-Dichlorobenzene	0.000288	0.00500	0.00100	0.00108	mg/kg
1,3-Dichlorobenzene	0.000273	0.00500	0.00100	0.00100	mg/kg
1,4-Dichlorobenzene	0.000214	0.00500	0.00100	0.00105	mg/kg
Dichlorodifluoromethan	0.00111	0.00500	0.00500	0.00418	mg/kg
1,2-Dichloroethane	0.000304	0.00500	0.00100	0.00101	mg/kg
1,1-Dichloroethane	0.000376	0.00500	0.00100	0.00108	mg/kg
trans-1,2-dichloroethyle	0.000434	0.00500	0.00100	0.000940	mg/kg
cis-1,2-Dichloroethylene	0.000301	0.00500	0.00100	0.000970	mg/kg
1,1-Dichloroethene	0.000277	0.00500	0.00100	0.00100	mg/kg
2,2-Dichloropropane	0.000524	0.00500	0.00100	0.000970	mg/kg
1,3-Dichloropropane	0.000409	0.00500	0.00100	0.000900	mg/kg
1,2-Dichloropropane	0.000198	0.00500	0.00100	0.000760	mg/kg
trans-1,3-dichloroproper	0.000909	0.00500	0.00100	0.00127	mg/kg
1,1-Dichloropropene	0.000448	0.00500	0.00100	0.00132	mg/kg
cis-1,3-Dichloropropene	0.000230	0.00500	0.00100	0.00124	mg/kg
Ethylbenzene	0.000336	0.00100	0.00100	0.00115	mg/kg
Hexachlorobutadiene	0.00200	0.00500	0.00100	0.00108	mg/kg
Isopropylbenzene	0.000174	0.00500	0.00100	0.00104	mg/kg
Methylene Chloride	0.00422	0.0200	0.00500	0.00572	mg/kg
MTBE	0.000409	0.00500	0.00100	0.00123	mg/kg
Naphthalene	0.00200	0.0100	0.00100	0.00104	mg/kg
n-Propylbenzene	0.000286	0.00500	0.00100	0.000940	mg/kg
Styrene	0.000205	0.00500	0.00100	0.000980	mg/kg
1,1,1,2-Tetrachloroethar	0.000267	0.00500	0.00100	0.000810	mg/kg
1,1,2,2-Tetrachloroethar	0.000470	0.00500	0.00100	0.000980	mg/kg
Tetrachloroethylene	0.000370	0.00500	0.00100	0.000950	mg/kg
Toluene	0.00100	0.00500	0.00100	0.00138	mg/kg
1,2,3-Trichlorobenzene	0.00200	0.00500	0.00500	0.00467	mg/kg
1,2,4-Trichlorobenzene	0.00200	0.00500	0.00100	0.000980	mg/kg

DCS Summary

692477

Analytical Method: **VOCs by SW-846 8260C**

Matrix: **Soil**

Prep Method: **SW5035A**

Laboratory: **Xenco - Houston**

Parameter	SDL	MQL	Spike Amount	Actual Amount	Units
1,1,2-Trichloroethane	0.000392	0.00500	0.00100	0.000880	mg/kg
1,1,1-Trichloroethane	0.000503	0.00500	0.00100	0.00135	mg/kg
Trichloroethylene	0.000494	0.00500	0.00100	0.000990	mg/kg
Trichlorofluoromethane	0.000307	0.00500	0.00100	0.00100	mg/kg
1,2,3-Trichloropropane	0.000450	0.00500	0.00100	0.00114	mg/kg
1,2,4-Trimethylbenzene	0.000255	0.00500	0.00100	0.000960	mg/kg
1,3,5-Trimethylbenzene	0.000289	0.00500	0.00100	0.000910	mg/kg
Vinyl Chloride	0.000441	0.00500	0.00100	0.00112	mg/kg
o-Xylene	0.000985	0.00100	0.00100	0.00118	mg/kg
m,p-Xylenes	0.000800	0.00200	0.00200	0.00226	mg/kg

DCS Summary

692514

Analytical Method: VOCs by SW-846 8260C

Matrix: Water

Prep Method: SW5030B

Laboratory: Xenco - Houston

Parameter	SDL	MQL	Spike Amount	Actual Amount	Units
Benzene	0.000214	0.00100	0.000250	0.000370	mg/L
Bromobenzene	0.000300	0.00100	0.000250	0.000370	mg/L
Bromochloromethane	0.000209	0.00100	0.000500	0.000440	mg/L
Bromodichloromethane	0.000231	0.00100	0.000250	0.000460	mg/L
Bromoform	0.000630	0.00500	0.00100	0.00124	mg/L
Methyl bromide	0.00105	0.00500	0.000500	0.000570	mg/L
2-Butanone	0.00575	0.0500	0.00500	0.00575	mg/L
n-Butylbenzene	0.000286	0.00100	0.00200	0.00176	mg/L
Sec-Butylbenzene	0.000199	0.00100	0.000250	0.000230	mg/L
tert-Butylbenzene	0.000195	0.00100	0.000250	0.000210	mg/L
Carbon Tetrachloride	0.000423	0.00500	0.000250	0.000270	mg/L
Chlorobenzene	0.000159	0.00100	0.000250	0.000280	mg/L
Chloroethane	0.000433	0.0100	0.000500	0.000630	mg/L
Chloroform	0.000259	0.00100	0.000250	0.000600	mg/L
Methyl Chloride	0.000318	0.0100	0.000250	0.000450	mg/L
2-Chlorotoluene	0.000214	0.00100	0.000250	0.000210	mg/L
4-Chlorotoluene	0.000183	0.00100	0.000250	0.000260	mg/L
p-Cymene (p-Isopropyl	0.000233	0.00100	0.000250	0.000150	mg/L
Dibromochloromethane	0.000739	0.00500	0.000250	0.000440	mg/L
1,2-Dibromo-3-Chlorop	0.000319	0.00100	0.00100	0.000800	mg/L
1,2-Dibromoethane	0.000337	0.00500	0.000500	0.000450	mg/L
Methylene Bromide	0.000130	0.00100	0.000500	0.000460	mg/L
1,2-Dichlorobenzene	0.000236	0.00100	0.000250	0.000360	mg/L
1,3-Dichlorobenzene	0.000197	0.00100	0.000250	0.000370	mg/L
1,4-Dichlorobenzene	0.000199	0.00100	0.000250	0.000430	mg/L
Dichlorodifluoromethan	0.000316	0.00100	0.000250	0.000310	mg/L
1,1-Dichloroethane	0.000244	0.00100	0.000250	0.000300	mg/L
1,2-Dichloroethane	0.000285	0.00100	0.000250	0.000260	mg/L
1,1-Dichloroethene	0.000216	0.00100	0.000250	0.000280	mg/L
cis-1,2-Dichloroethylene	0.000174	0.00100	0.000250	0.000240	mg/L
trans-1,2-dichloroethyle	0.000256	0.00100	0.000250	0.000200	mg/L
1,2-Dichloropropane	0.000396	0.00500	0.000250	0.000270	mg/L
1,3-Dichloropropane	0.000439	0.00500	0.000250	0.000240	mg/L
2,2-Dichloropropane	0.000360	0.00500	0.000250	0.000170	mg/L
1,1-Dichloropropene	0.000481	0.00500	0.000250	0.000290	mg/L
cis-1,3-Dichloropropene	0.000690	0.00500	0.000500	0.000390	mg/L
trans-1,3-dichloroproper	0.000752	0.00500	0.000500	0.000420	mg/L
Ethylbenzene	0.000146	0.00100	0.000250	0.000260	mg/L
Hexachlorobutadiene	0.00200	0.00500	0.00200	0.00197	mg/L
Isopropylbenzene	0.000161	0.00100	0.000250	0.000240	mg/L
Methylene Chloride	0.00191	0.00500	0.00200	0.00206	mg/L
MTBE	0.000571	0.00500	0.000500	0.000750	mg/L
Naphthalene	0.00200	0.0100	0.00200	0.00145	mg/L
n-Propylbenzene	0.000179	0.00100	0.000250	0.000280	mg/L
Styrene	0.000162	0.00100	0.000250	0.000290	mg/L
1,1,1,2-Tetrachloroethar	0.000327	0.00100	0.000500	0.000540	mg/L
1,1,2,2-Tetrachloroethar	0.000284	0.00100	0.000500	0.000460	mg/L
Tetrachloroethylene	0.000500	0.00100	0.000500	0.000500	mg/L
Toluene	0.000500	0.00100	0.000500	0.000480	mg/L
1,2,3-Trichlorobenzene	0.00200	0.00500	0.00200	0.00174	mg/L
1,2,4-Trichlorobenzene	0.00200	0.00500	0.00200	0.00189	mg/L

DCS Summary

692514

Analytical Method: **VOCs by SW-846 8260C**

Matrix: **Water**

Parameter	SDL	ML	Spike Amount	Actual Amount	Units
1,1,1-Trichloroethane	0.000504	0.00500	0.000250	0.000200	mg/L
1,1,2-Trichloroethane	0.000228	0.00100	0.000500	0.000460	mg/L
Trichloroethylene	0.000424	0.00500	0.000250	0.000210	mg/L
Trichlorofluoromethane	0.000245	0.00100	0.000250	0.000360	mg/L
1,2,3-Trichloropropane	0.000283	0.00100	0.000250	0.000270	mg/L
1,2,4-Trimethylbenzene	0.000252	0.00100	0.000250	0.000280	mg/L
1,3,5-Trimethylbenzene	0.000279	0.00100	0.000250	0.000210	mg/L
o-Xylene	0.000192	0.00100	0.000500	0.000430	mg/L
m,p-Xylenes	0.000330	0.0100	0.00100	0.000900	mg/L
Vinyl Chloride	0.000234	0.00200	0.000250	0.000240	mg/L

Appendix A

Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Job No. 860-51389-1 and consists of:

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

- ☒ R1- Field chain-of-custody documentation;
- ☒ R2 - Sample identification cross-reference;
- ☒ R3 - Test reports (analytical data sheets) for each environmental sample that includes:
 - a. Items consistent with NELAC Chapter 5,
 - b. dilution factors,
 - c. preparation methods,
 - d. cleanup methods, and
 - e. if required for the project, tentatively identified compounds (TICs).
- ☒ R4 - Surrogate recovery data including:
 - a. Calculated recovery (%R), and
 - b. The laboratory's surrogate QC limits.
- ☒ R5 - Test reports/summary forms for blank samples;
- ☒ R6 - Test reports/summary forms for laboratory control samples (LCSs) including:
 - a. LCS spiking amounts,
 - b. Calculated %R for each analyte, and
 - c. The laboratory's LCS QC limits.
- ☒ R7 - Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a. Samples associated with the MS/MSD clearly identified,
 - b. MS/MSD spiking amounts,
 - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d. Calculated %Rs and relative percent differences (RPDs), and
 - e. The laboratory's MS/MSD QC limits
- ☒ R8 - Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- ☒ R9 - List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 - Other problems or anomalies.
- ☐ Exception Report for every "No" or "Not Reviewed (NR)" item in Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Check, if applicable: ☐ This laboratory meets an exception under 30 TAC §25.6 and was last inspected by ☐ TCEQ or ☐ _____ on __/__/__. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name (Printed)	Signature	Official Title (Printed)	Date
Debbie Simmons		Project Manager	06/29/2023

Laboratory Data Package Cover Page - Page 2 of 4

Laboratory Name: Eurofins Houston			LRC Date: 06/29/2023				
Project Name: 7811 Harrisburg			Laboratory Job Number: 860-51389-1				
Reviewer Name: Debbie Simmons							
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
		Were all departures from standard conditions described in an exception report?	✓				
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	✓				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	✓				
		Were calculations checked by a peer or supervisor?	✓				
		Were all analyte identifications checked by a peer or supervisor?	✓				
		Were sample detection limits reported for all analytes not detected?	✓				
		Were all results for soil and sediment samples reported on a dry weight basis?	✓				
		Were % moisture (or solids) reported for all soil and sediment samples?	✓				
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?	✓				
		If required for the project, are TICs reported?			✓		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?	✓				
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	✓				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	✓				
		Were blanks analyzed at the appropriate frequency?	✓				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
		Were blank concentrations < MQL?	✓				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	✓				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
		Were LCSs analyzed at the required frequency?	✓				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	✓				
		Was the LCSD RPD within QC limits?	✓				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	✓				
		Were MS/MSD analyzed at the appropriate frequency?	✓				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				
		Were MS/MSD RPDs within laboratory QC limits?	✓				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	✓				
		Were analytical duplicates analyzed at the appropriate frequency?	✓				
		Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	✓				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	✓				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	✓				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	✓				

Laboratory Data Package Cover Page - Page 3 of 4

Laboratory Name: Eurofins Houston			LRC Date: 06/29/2023				
Project Name: 7811 Harrisburg			Laboratory Job Number: 860-51389-1				
Reviewer Name: Debbie Simmons							
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	✓				
		Were percent RSDs or correlation coefficient criteria met?	✓				
		Was the number of standards recommended in the method used for all analytes?	✓				
		Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
		Are ICAL data available for all instruments used?	✓				
		Has the initial calibration curve been verified using an appropriate second source standard?	✓				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	✓				
		Were percent differences for each analyte within the method-required QC limits?	✓				
		Was the ICAL curve verified for each analyte?	✓				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	✓				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	✓				
		Were ion abundance data within the method-required QC limits?	✓				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	✓				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
		Were data associated with manual integrations flagged on the raw data?	✓				
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			✓		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	✓				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
S10	OI	Method detection limit (MDL) studies					
		Was a MDL study performed for each reported analyte?	✓				
		Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	✓				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	✓				
		Is documentation of the analyst's competency up-to-date and on file?	✓				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed?	✓				

- Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period;
- O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
- NA = Not applicable;
- NR = Not reviewed;
- ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Cover Page - Page 4 of 4

Laboratory Name: Eurofins Houston		LRC Date: 06/29/2023	
Project Name: 7811 Harrisburg		Laboratory Job Number: 860-51389-1	
Reviewer Name: Debbie Simmons			
ER#¹	Description		
	No Exceptions		
1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).			

- 1
- 2
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Case Narrative

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Job ID: 860-51389-1

Laboratory: Eurofins Houston

Narrative

Job Narrative
860-51389-1

Comments

No additional comments.

Receipt

The samples were received on 6/16/2023 1:07 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.0° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Client Sample ID: Trip Blank

Lab Sample ID: 860-51389-1

No Detections.

Client Sample ID: SB-03A 0-2

Lab Sample ID: 860-51389-2

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00856	J	0.0100	0.00368	mg/L	1		6010B	SPLP West

Client Sample ID: SB-04A 0-2

Lab Sample ID: 860-51389-3

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0247		0.0100	0.00125	mg/L	1		6010B	SPLP West

Client Sample ID: SB-05A 0-2

Lab Sample ID: 860-51389-4

No Detections.

Client Sample ID: FD-01

Lab Sample ID: 860-51389-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Houston

Client Sample Results

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Client Sample ID: Trip Blank

Date Collected: 06/16/23 00:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-1

Matrix: Water

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L			06/20/23 23:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		63 - 144					06/20/23 23:22	1
4-Bromofluorobenzene (Surr)	103		74 - 124					06/20/23 23:22	1
Dibromofluoromethane (Surr)	94		75 - 131					06/20/23 23:22	1
Toluene-d8 (Surr)	98		80 - 120					06/20/23 23:22	1

Client Sample ID: SB-03A 0-2

Date Collected: 06/16/23 08:30

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-2

Matrix: Solid

Method: SW846 6010B - Metals (ICP) - SPLP West

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00856	J	0.0100	0.00368	mg/L		06/21/23 09:30	06/21/23 22:05	1

Client Sample ID: SB-04A 0-2

Date Collected: 06/16/23 10:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-3

Matrix: Solid

Method: SW846 6010B - Metals (ICP) - SPLP West

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0247		0.0100	0.00125	mg/L		06/21/23 09:30	06/21/23 22:00	1

Client Sample ID: SB-05A 0-2

Date Collected: 06/16/23 10:30

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-4

Matrix: Solid

Percent Solids: 79.4

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	<0.00834	U	0.0198	0.00834	mg/Kg	☆	06/16/23 20:00	06/23/23 16:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		56 - 150				06/16/23 20:00	06/23/23 16:20	1
4-Bromofluorobenzene (Surr)	100		68 - 152				06/16/23 20:00	06/23/23 16:20	1
Dibromofluoromethane (Surr)	82		53 - 142				06/16/23 20:00	06/23/23 16:20	1
Toluene-d8 (Surr)	98		70 - 130				06/16/23 20:00	06/23/23 16:20	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	20.6				%			06/21/23 13:01	1
Percent Solids (EPA Moisture)	79.4				%			06/21/23 13:01	1

Client Sample ID: FD-01

Date Collected: 06/16/23 00:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-5

Matrix: Solid

Percent Solids: 82.8

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	<0.00782	U	0.0186	0.00782	mg/Kg	☆	06/16/23 20:00	06/23/23 16:41	1

Eurofins Houston

Client Sample Results

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Client Sample ID: FD-01

Date Collected: 06/16/23 00:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-5

Matrix: Solid

Percent Solids: 82.8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		56 - 150	06/16/23 20:00	06/23/23 16:41	1
4-Bromofluorobenzene (Surr)	98		68 - 152	06/16/23 20:00	06/23/23 16:41	1
Dibromofluoromethane (Surr)	80		53 - 142	06/16/23 20:00	06/23/23 16:41	1
Toluene-d8 (Surr)	103		70 - 130	06/16/23 20:00	06/23/23 16:41	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	17.2				%			06/21/23 13:01	1
Percent Solids (EPA Moisture)	82.8				%			06/21/23 13:01	1

Unadjusted Detection Limits

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	MQL	MDL	Units
Methylene Chloride	0.00500	0.00173	mg/L

Method: 8260C - Volatile Organic Compounds by GC/MS

Prep: 5035

Analyte	MQL	MDL	Units
Methylene Chloride	0.0200	0.00842	mg/Kg

Method: 6010B - Metals (ICP) - SPLP West

Prep: 3010A

Leach: 1312

Analyte	MQL	MDL	Units
Barium	0.0100	0.00125	mg/L
Lead	0.0100	0.00368	mg/L

Surrogate Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (56-150)	BFB (68-152)	DBFM (53-142)	TOL (70-130)
860-51389-4	SB-05A 0-2	107	100	82	98
860-51389-5	FD-01	106	98	80	103
LCS 860-109269/3	Lab Control Sample	102	96	93	99
LCSD 860-109269/4	Lab Control Sample Dup	103	101	94	98
MB 860-109269/8	Method Blank	106	100	86	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (63-144)	BFB (74-124)	DBFM (75-131)	TOL (80-120)
860-51389-1	Trip Blank	86	103	94	98
LCS 860-108793/31	Lab Control Sample	84	104	95	97
LCSD 860-108793/4	Lab Control Sample Dup	83	102	93	97
MB 860-108793/10	Method Blank	84	103	92	99

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

QC Sample Results

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 860-108793/10

Matrix: Water

Analysis Batch: 108793

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	<0.00173	U	0.00500	0.00173	mg/L			06/20/23 23:01	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		63 - 144					06/20/23 23:01	1
4-Bromofluorobenzene (Surr)	103		74 - 124					06/20/23 23:01	1
Dibromofluoromethane (Surr)	92		75 - 131					06/20/23 23:01	1
Toluene-d8 (Surr)	99		80 - 120					06/20/23 23:01	1

Lab Sample ID: LCS 860-108793/31

Matrix: Water

Analysis Batch: 108793

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	0.0500	0.04677		mg/L		94	71 - 125
Surrogate	%Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	84		63 - 144				
4-Bromofluorobenzene (Surr)	104		74 - 124				
Dibromofluoromethane (Surr)	95		75 - 131				
Toluene-d8 (Surr)	97		80 - 120				

Lab Sample ID: LCSD 860-108793/4

Matrix: Water

Analysis Batch: 108793

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methylene Chloride	0.0500	0.04888		mg/L		98	71 - 125	4	25
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	83		63 - 144						
4-Bromofluorobenzene (Surr)	102		74 - 124						
Dibromofluoromethane (Surr)	93		75 - 131						
Toluene-d8 (Surr)	97		80 - 120						

Lab Sample ID: MB 860-109269/8

Matrix: Solid

Analysis Batch: 109269

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	<0.00842	U	0.0200	0.00842	mg/Kg			06/23/23 13:26	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		56 - 150					06/23/23 13:26	1
4-Bromofluorobenzene (Surr)	100		68 - 152					06/23/23 13:26	1
Dibromofluoromethane (Surr)	86		53 - 142					06/23/23 13:26	1
Toluene-d8 (Surr)	98		70 - 130					06/23/23 13:26	1

Eurofins Houston

QC Sample Results

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 860-109269/3

Matrix: Solid

Analysis Batch: 109269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	0.0500	0.04785		mg/Kg		96	57 - 134
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	102		56 - 150				
4-Bromofluorobenzene (Surr)	96		68 - 152				
Dibromofluoromethane (Surr)	93		53 - 142				
Toluene-d8 (Surr)	99		70 - 130				

Lab Sample ID: LCSD 860-109269/4

Matrix: Solid

Analysis Batch: 109269

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methylene Chloride	0.0500	0.04330		mg/Kg		87	57 - 134	10	25
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	103		56 - 150						
4-Bromofluorobenzene (Surr)	101		68 - 152						
Dibromofluoromethane (Surr)	94		53 - 142						
Toluene-d8 (Surr)	98		70 - 130						

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 860-108875/1-A

Matrix: Solid

Analysis Batch: 109067

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 108875

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00125	U	0.0100	0.00125	mg/L		06/21/23 09:30	06/21/23 21:23	1
Lead	<0.00368	U	0.0100	0.00368	mg/L		06/21/23 09:30	06/21/23 21:23	1

Lab Sample ID: LCS 860-108875/2-A

Matrix: Solid

Analysis Batch: 109067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 108875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	1.00	0.9500		mg/L		95	80 - 120
Lead	1.00	0.9860		mg/L		99	80 - 120

Lab Sample ID: LCSD 860-108875/3-A

Matrix: Solid

Analysis Batch: 109067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 108875

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Barium	1.00	0.9490		mg/L		95	80 - 120	0	20
Lead	1.00	0.9850		mg/L		99	80 - 120	0	20

Eurofins Houston

QC Sample Results

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB 860-108797/1-B
Matrix: Solid
Analysis Batch: 109067

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 108875

Analyte	LB LB		MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.00125	U	0.0100	0.00125	mg/L		06/21/23 09:30	06/21/23 21:57	1
Lead	<0.00368	U	0.0100	0.00368	mg/L		06/21/23 09:30	06/21/23 21:57	1

Lab Sample ID: 860-51389-3 MS
Matrix: Solid
Analysis Batch: 109067

Client Sample ID: SB-04A 0-2
Prep Type: SPLP West
Prep Batch: 108875

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Barium	0.0247		1.00	1.040		mg/L		102	75 - 125
Lead	0.0186		1.00	1.070		mg/L		105	75 - 125

Method: Moisture - Percent Moisture

Lab Sample ID: MB 860-108933/1
Matrix: Solid
Analysis Batch: 108933

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Percent Moisture	0.03				%			06/21/23 13:01	1
Percent Solids	100				%			06/21/23 13:01	1

QC Association Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

GC/MS VOA

Prep Batch: 108450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-4	SB-05A 0-2	Total/NA	Solid	5035	108450
860-51389-5	FD-01	Total/NA	Solid	5035	

Analysis Batch: 108793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-1	Trip Blank	Total/NA	Water	8260C	108793
MB 860-108793/10	Method Blank	Total/NA	Water	8260C	
LCS 860-108793/31	Lab Control Sample	Total/NA	Water	8260C	
LCSD 860-108793/4	Lab Control Sample Dup	Total/NA	Water	8260C	

Analysis Batch: 109269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-4	SB-05A 0-2	Total/NA	Solid	8260C	108450
860-51389-5	FD-01	Total/NA	Solid	8260C	108450
MB 860-109269/8	Method Blank	Total/NA	Solid	8260C	109269
LCS 860-109269/3	Lab Control Sample	Total/NA	Solid	8260C	
LCSD 860-109269/4	Lab Control Sample Dup	Total/NA	Solid	8260C	

Metals

Leach Batch: 108797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-2	SB-03A 0-2	SPLP West	Solid	1312	108797
860-51389-3	SB-04A 0-2	SPLP West	Solid	1312	
LB 860-108797/1-B	Method Blank	SPLP West	Solid	1312	
860-51389-3 MS	SB-04A 0-2	SPLP West	Solid	1312	

Prep Batch: 108875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-2	SB-03A 0-2	SPLP West	Solid	3010A	108797
860-51389-3	SB-04A 0-2	SPLP West	Solid	3010A	108797
LB 860-108797/1-B	Method Blank	SPLP West	Solid	3010A	108797
MB 860-108875/1-A	Method Blank	Total/NA	Solid	3010A	108875
LCS 860-108875/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 860-108875/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	
860-51389-3 MS	SB-04A 0-2	SPLP West	Solid	3010A	108797

Analysis Batch: 109067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-2	SB-03A 0-2	SPLP West	Solid	6010B	108875
860-51389-3	SB-04A 0-2	SPLP West	Solid	6010B	108875
LB 860-108797/1-B	Method Blank	SPLP West	Solid	6010B	108875
MB 860-108875/1-A	Method Blank	Total/NA	Solid	6010B	108875
LCS 860-108875/2-A	Lab Control Sample	Total/NA	Solid	6010B	108875
LCSD 860-108875/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	108875
860-51389-3 MS	SB-04A 0-2	SPLP West	Solid	6010B	108875

General Chemistry

Analysis Batch: 108933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-4	SB-05A 0-2	Total/NA	Solid	Moisture	108933

Eurofins Houston

QC Association Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

General Chemistry (Continued)

Analysis Batch: 108933 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-51389-5	FD-01	Total/NA	Solid	Moisture	
MB 860-108933/1	Method Blank	Total/NA	Solid	Moisture	

1
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Lab Chronicle

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Client Sample ID: Trip Blank

Date Collected: 06/16/23 00:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260C		1	108793	NA	EET HOU	06/20/23 23:22

Client Sample ID: SB-03A 0-2

Date Collected: 06/16/23 08:30

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
SPLP West	Leach	1312			108797	EMC	EET HOU	06/20/23 14:00
SPLP West	Prep	3010A			108875	MD	EET HOU	06/21/23 09:30
SPLP West	Analysis	6010B		1	109067	JDM	EET HOU	06/21/23 22:05

Client Sample ID: SB-04A 0-2

Date Collected: 06/16/23 10:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
SPLP West	Leach	1312			108797	EMC	EET HOU	06/20/23 14:00
SPLP West	Prep	3010A			108875	MD	EET HOU	06/21/23 09:30
SPLP West	Analysis	6010B		1	109067	JDM	EET HOU	06/21/23 22:00

Client Sample ID: SB-05A 0-2

Date Collected: 06/16/23 10:30

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	108933	JM	EET HOU	06/21/23 13:01

Client Sample ID: SB-05A 0-2

Date Collected: 06/16/23 10:30

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-4

Matrix: Solid

Percent Solids: 79.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			108450	MTMG	EET HOU	06/16/23 20:00
Total/NA	Analysis	8260C		1	109269	KLV	EET HOU	06/23/23 16:20

Client Sample ID: FD-01

Date Collected: 06/16/23 00:00

Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	108933	JM	EET HOU	06/21/23 13:01

Lab Chronicle

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Client Sample ID: FD-01
Date Collected: 06/16/23 00:00
Date Received: 06/16/23 13:07

Lab Sample ID: 860-51389-5
Matrix: Solid
Percent Solids: 82.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			108450	MTMG	EET HOU	06/16/23 20:00
Total/NA	Analysis	8260C		1	109269	KLV	EET HOU	06/23/23 16:41

Laboratory References:
EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Laboratory: Eurofins Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704215-23-50	06-30-23
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Solids

Method Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET HOU
6010B	Metals (ICP)	SW846	EET HOU
Moisture	Percent Moisture	EPA	EET HOU
1312	SPLP Extraction	SW846	EET HOU
3010A	Preparation, Total Metals	SW846	EET HOU
5030C	Purge and Trap	SW846	EET HOU
5035	Closed System Purge and Trap	SW846	EET HOU

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: ESE Partners
Project/Site: 7811 Harrisburg

Job ID: 860-51389-1
SDG: 20-0563

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
860-51389-1	Trip Blank	Water	06/16/23 00:00	06/16/23 13:07
860-51389-2	SB-03A 0-2	Solid	06/16/23 08:30	06/16/23 13:07
860-51389-3	SB-04A 0-2	Solid	06/16/23 10:00	06/16/23 13:07
860-51389-4	SB-05A 0-2	Solid	06/16/23 10:30	06/16/23 13:07
860-51389-5	FD-01	Solid	06/16/23 00:00	06/16/23 13:07

Chain of Custody Record



Client Information Client Contact: Tim O'Neill Phone: _____ Email: _____ Company: ESE Partners		Lab PM: Simmons, Debbie Email: _____ PWSID: _____		Carrier Tracking No(s): 860-19929-6850.1 State of Origin: _____		COC No: 860-19929-6850.1 Page: Page 1 of 1 Job #: _____	
Address: 2002 West Grand Parkway North Suite 140 City: Katy State, Zip: TX, 77449 Phone: _____				Due Date Requested: _____ TAT Requested (days): _____ Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Purchase Order not required PO #: _____ WO #: _____ Project #: 86000762 SSONW#: _____			
Sample Identification Trip Blank SB-03A 0-2 SB-04A 0-2 SB-05A 0-2 FD-01 IDW-Soil		Sample Date 6/14/23 6/14/23 6/14/23 6/14/23 6/14/23		Sample Time 0830 1506 1030 1015 1015		Sample Type (C=Comp, G=grab) G G G G G	
Matrix (Inventor, Swirl, Overstabil, BT-Trace, AAU) S S S S S		Field Filtered Sample (Yes or No) X X X X X		Preservation Codes: 6010B 6010 SPLP Barium 6010B 6010 SPLP Lead 6260C VOCs Methylene Chloride only 6010B 6010 SPLP Barium 6010B 6010 SPLP Lead 6260C VOCs Methylene Chloride only		Special Instructions/Note: 860-51389 Chain of Custody Temp: 54 IR ID:HOU-343 CF: 0.4 Corrected Temp: 5.0	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I II III IV Other (specify) _____				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: _____			
Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Date: 6/14/23 1357 _____ _____ _____		Method of Shipment: _____ _____ _____		Date/Time: 6/16/23 1307 _____ _____ _____	
Custody Seals Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Custody Seal No. _____		Company: ESE _____ _____ _____		Company: _____ _____ _____	

Login Sample Receipt Checklist

Client: ESE Partners

Job Number: 860-51389-1

SDG Number: 20-0563

Login Number: 51389

List Number: 1

Creator: Rubio, Yuri

List Source: Eurofins Houston

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

APPENDIX D

SIGNED HASP SHEETS

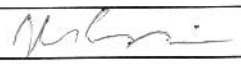
XIII. DOCUMENTATION

ESE PARTNERS, LLC PERSONNEL TRAINING AND MEDICAL RECORDS ARE AT 2002 WEST GRAND PARKWAY NORTH, SUITE 140, KATY, TX, 77449. RECORDS WILL BE MAINTAINED ONSITE AS NECESSARY.

A. PROJECT PERSONNEL LIST AND SAFETY PLAN DISTRIBUTION RECORD

1. ESE Partners, LLC Employees

All project staff must sign, indicating they have read and understand the Site Safety Plan. A copy of this Site Safety Plan must be made available for their review and readily available at the job site.

Employee Name/Job Title	Date Distributed	Signature
Tim O'Neil, P.E., Project Manager	April 5, 2023	
Aaron Munsart, P.G., Quality Assurance Officer	April 5, 2023	
John Cunningham, Field Sampling Lead	April 5, 2023	

2. Contractors, Subcontractors

A copy of this safety plan shall be provided to contractors and subcontractors who may be affected by activities covered under the scope of this Site Safety Plan. All contractors and subcontractors must comply with applicable OSHA, EPA, and local government rules and regulations.

Firm Name	Contact Person	Date Distributed
MEDI	Shannon Mathers	6/11/23

- [illegible]

- ## VISITOR LOG

[illegible]

XIV. CONTINGENCY/EMERGENCY INFORMATION

A. REQUIRED EMERGENCY EQUIPMENT LOCATION

Safety shower/eyewash: Provided by contractor.
First aid kit: ESE vehicle
Fire extinguisher: Contractor / ESE vehicle
Other: Mobile phone in ESE vehicle.

B. EMERGENCY TELEPHONE NUMBERS

Ambulance: 911
Police: 911
Fire department: 911
Hospital: Texas Specialty Hospital (6160 South Loop East, Houston, Harris County, Texas 77087)
Client contact: Christa Stoneham (713-730-8682)
Poison Control Center: (800) 222-1222
Project Manager (Tim O'Neil) Office 281.501.6100 Mobile: 281.797.7335
DHSO (Colton Barr) Office 281.501.6100 Mobile: 979.540.9880

C. * STANDARD PROCEDURES FOR REPORTING EMERGENCIES:

When calling for assistance in an emergency situation, the following information should be provided:

1. Name of person making call
2. Telephone number at location of person making call
3. Name of person(s) exposed or injured
4. Nature of emergency
5. Actions already taken

Recipient of call should hang up first-not the caller.

D. EMERGENCY ROUTES: ATTACH MAP SHOWING ROUTE TO NEAREST HOSPITAL. DESCRIBE NARRATIVELY THE ROUTE TO THE HOSPITAL. HAS HOSPITAL BEEN CONTACTED TO DETERMINE IF THEY WILL HANDLE A CHEMICAL EXPOSURE?

In case of emergency, personnel are to gather at the south entrance of the Site near the gate.

E. CONTINGENCY PLANS AS APPROPRIATE: DESCRIBE CONTINGENCY PLANS FOR EMERGENCIES SUCH AS: FIRES, EMERGENCY CARE, INJURY, PPE, OR OTHER EQUIPMENT FAILURE. INCLUDE EMERGENCY SIGNALS AND EVACUATION ROUTES. IF FORMAL CONTINGENCY PLAN DOCUMENT HAS BEEN PREPARED, ATTACH A COPY.

POST AT JOB SITE (AS APPROPRIATE)

Plate 1 SITE LOCATION



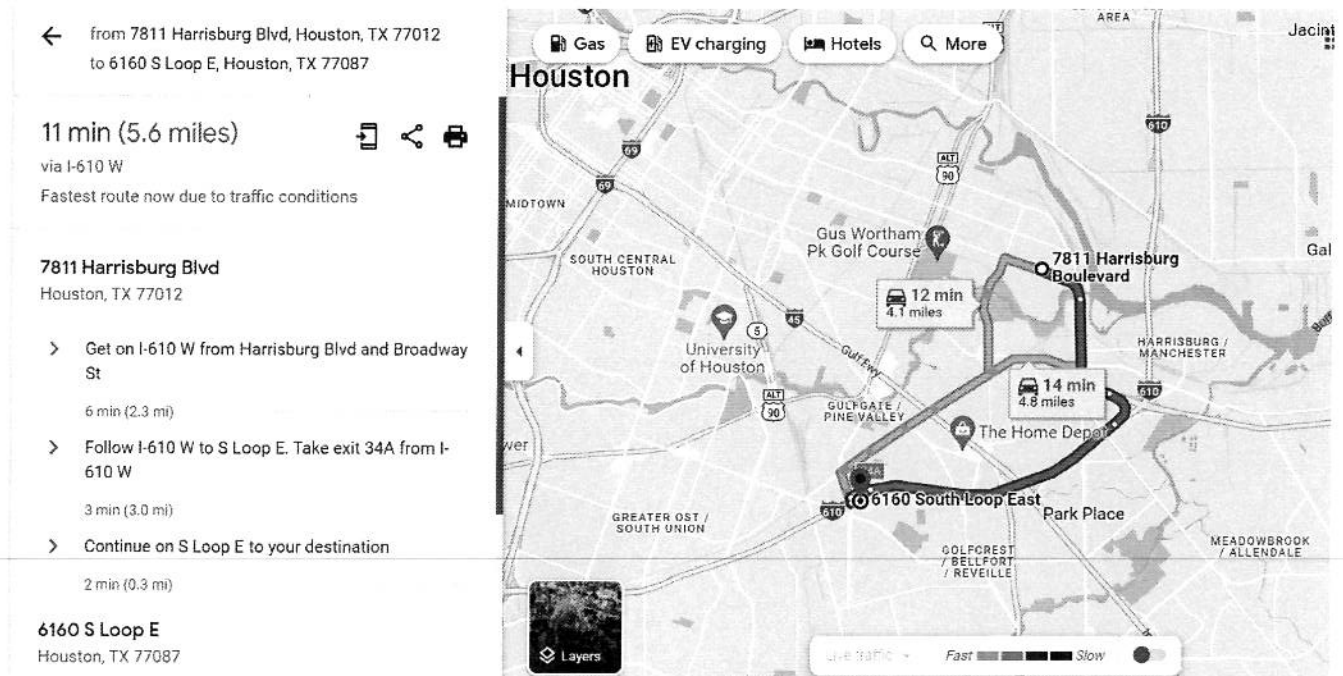
Plate 2 SITE TO HOSPITAL DIRECTIONS and MAP

Directions from the Site @ 7811 Harrisburg Blvd, Houston, Texas to

Texas Specialty Hospital @ 6160 South Loop East, Houston, Texas

Phone Number: 713-640-2400

Distance from Site: 3.20 miles



Appendix A

HAZARDOUS PROPERTY INFORMATION

This appendix contains hazardous property information for selected compounds. Place a check mark next to each compound identified in Section IV, and review the hazardous property information for those compounds. If you have identified compounds in Section IV that are not listed in the appendix, you must list the compounds and enter the appropriate information.

(INCLUDE COPIES OF MATERIAL SAFETY DATA SHEETS FOR SELECTED COMPOUNDS IN ADDITION TO COMPLETION OF APPENDIX A.)

HAZARDOUS PROPERTY INFORMATION EXPLANATIONS AND FOOTNOTES

Water solubility is expressed in different terms in different references. Many references use the term "insoluble" for materials that will not readily mix with water, such as gasoline. However, most of these materials are water soluble at the part per million or part per billion level. Gasoline, for example, is insoluble in the gross sense, and will be found as a discrete layer on top of the groundwater. But certain gasoline constituents, such as benzene, toluene, and xylene will also be found in solution in the groundwater at the part per million or part per billion level.

- a. Water solubility expressed as 0.2 g means 0.2 grams per 100 grams water at 20°C.
- b. Solubility of metals depends on the compound in which they are present.
- c. Several chlorinated hydrocarbons exhibit no flash point in conventional sense, but will burn in presence of high energy ignition source or will form explosive mixtures at temperatures above 200°F.
- d. Practically non-flammable under standard conditions.
- e. Expressed as mm Hg under standard conditions.
- f. Explosive concentrations of airborne dust can occur in confined areas.
- g. Values for Threshold Limit Value-Time Weighted Average (TLV-TWA) are OSHA Permissible Exposure Limits except where noted in h and i.
- h. TLV-TWA adopted by the American Conference of Governmental Industrial Hygienists, which is lower than the OSHA PEL.
- i. TLV-TWA recommended by the national Institute for Occupational Safety and Health (NIOSH). A TLV or PEL has not been adopted by ACGIH or OSHA.
- j.

A	-	corrosive
B	-	flammable
C	-	toxic
D	-	volatile
E	-	reactive
F	-	radioactive
G	-	carcinogen
H	-	infectious
- k. Dermal Toxicity data is summarized in the following three categories:

Skin Penetration

-	A	-	negligible penetration (solid-polar)
+	B	-	slight penetration (solid-nonpolar)
++	C	-	moderate penetration (liquid/solid-nonpolar)
+++	D	-	high penetration (gas/liquid-nonpolar)

Systemic Potency

- | | | |
|---|---|---|
| E | - | slight hazard - LD ₅₀ = 500-15,000 mg/kg
lethal dose for 70 kg man = 1 pint-1 quart |
| F | - | moderate hazard - LD ₅₀ = 50-500 mg/kg
lethal dose for 70 kg man = 1 ounce-1 pint |
| G | - | extreme hazard - LD ₅₀ = 10-50 mg/kg
lethal dose for 70 kg/man = drops to 20 ml |

Local Potency

- | | | |
|---|---|--|
| H | - | slight - reddening of skin |
| I | - | moderate - irritation/inflammation of skin |
| J | - | extreme - tissue destruction/necrosis |

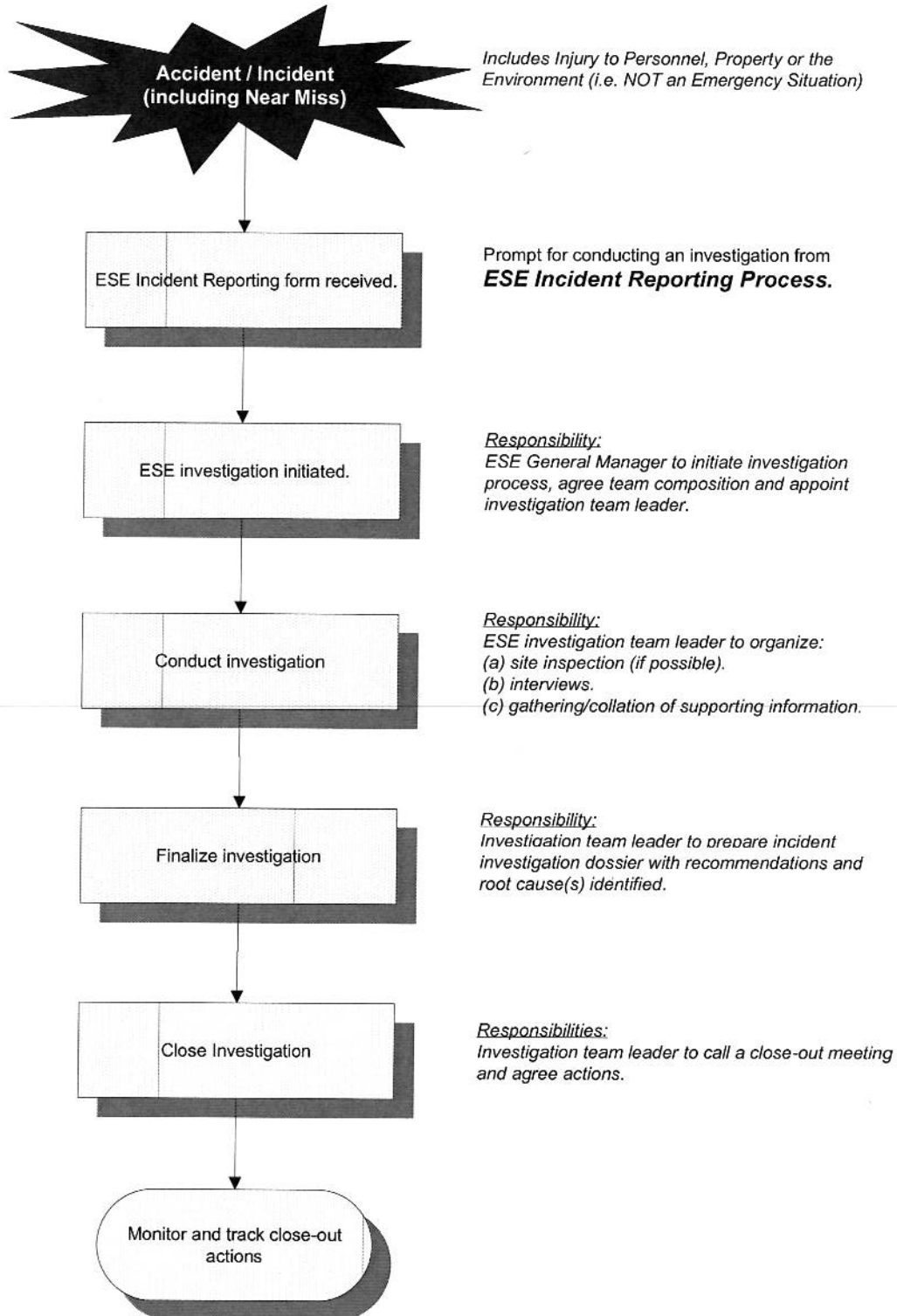
I. Acute Exposure Symptoms

- | | | |
|---|---|-----------------------------------|
| A | - | abdominal pain |
| B | - | central nervous system depression |
| C | - | comatose |
| D | - | convulsions |
| E | - | confusion |
| F | - | dizziness |
| G | - | diarrhea |
| H | - | drowsiness |
| I | - | eye irritation |
| J | - | fever |
| K | - | headache |
| L | - | nausea |
| M | - | respiratory system irritation |
| N | - | skin irritation |
| O | - | tremors |
| P | - | unconsciousness |
| Q | - | vomiting |
| R | - | weakness |

APPENDIX B

Accident Investigation

ESE INCIDENT INVESTIGATION PROCESS



APPENDIX C

Equipment Calibration and Maintenance

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6116123

PID

7811 Harrisburg

0800

A54xCalibrated

Appendix D
First Aid and Incident Report

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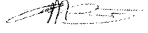
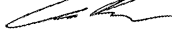
XIII. DOCUMENTATION

ESE PARTNERS, LLC PERSONNEL TRAINING AND MEDICAL RECORDS ARE AT 2002 WEST GRAND PARKWAY NORTH, SUITE 140, KATY, TX, 77449. RECORDS WILL BE MAINTAINED ONSITE AS NECESSARY.

A. PROJECT PERSONNEL LIST AND SAFETY PLAN DISTRIBUTION RECORD

1. ESE Partners, LLC Employees

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Firm Name	Contact Person	Date Distributed

- B. HEALTH AND SAFETY MEETING - ALL PERSONNEL PARTICIPATING IN THE PROJECT MUST RECEIVE INITIAL HEALTH AND SAFETY ORIENTATION. THEREAFTER, A BRIEF TAILGATE SAFETY MEETING IS REQUIRED AS DEEMED NECESSARY BY THE SITE SAFETY OFFICER (OR AT LEAST ONCE EVERY 10 WORKING DAYS).

Date	Topics	Name of Attendee	Firm Name	Employee Initials
6/19/23	QAPP, Site Safety	Colton Barr	ESE	CB

VISITOR LOG

[illegible]

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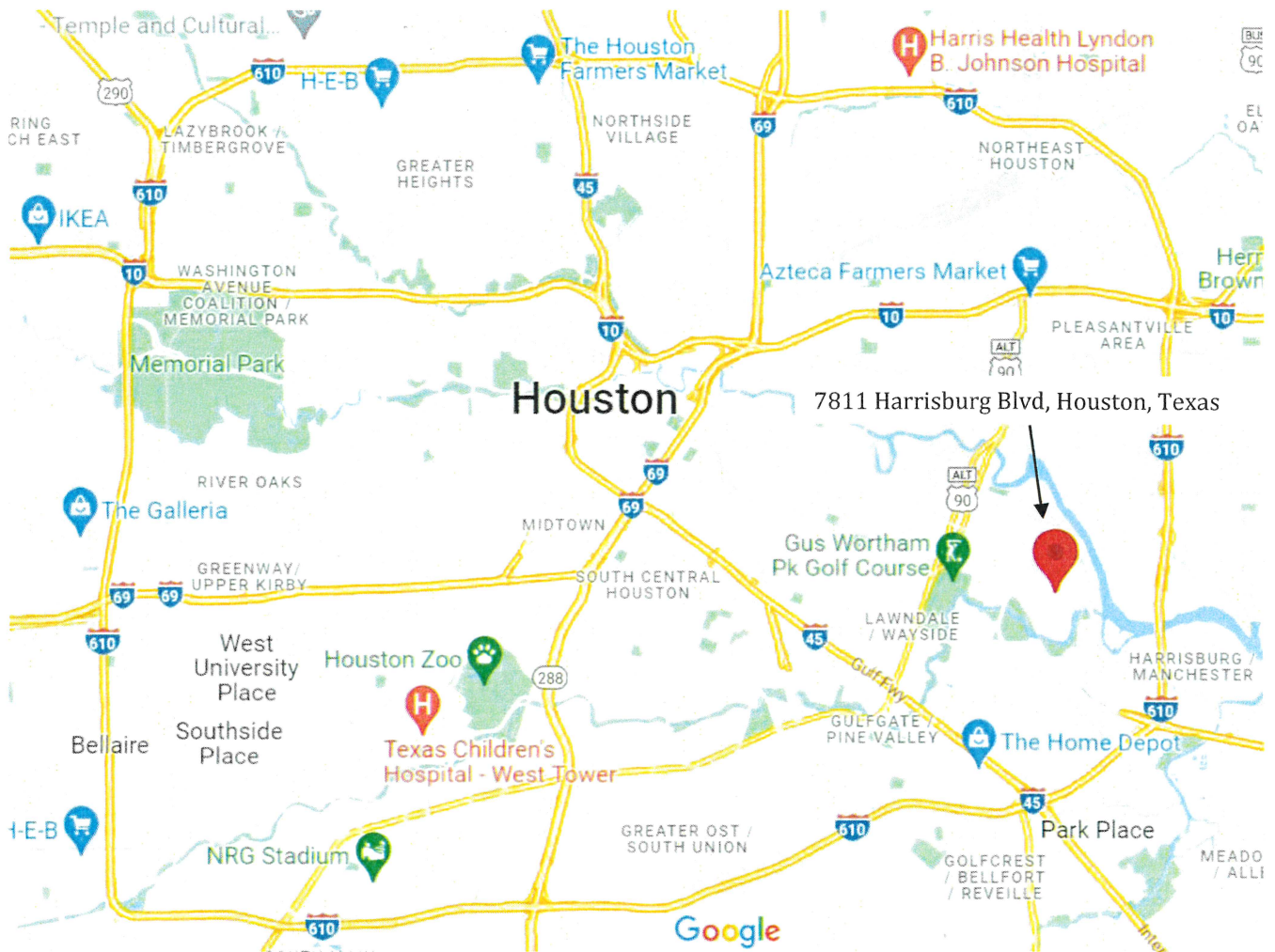


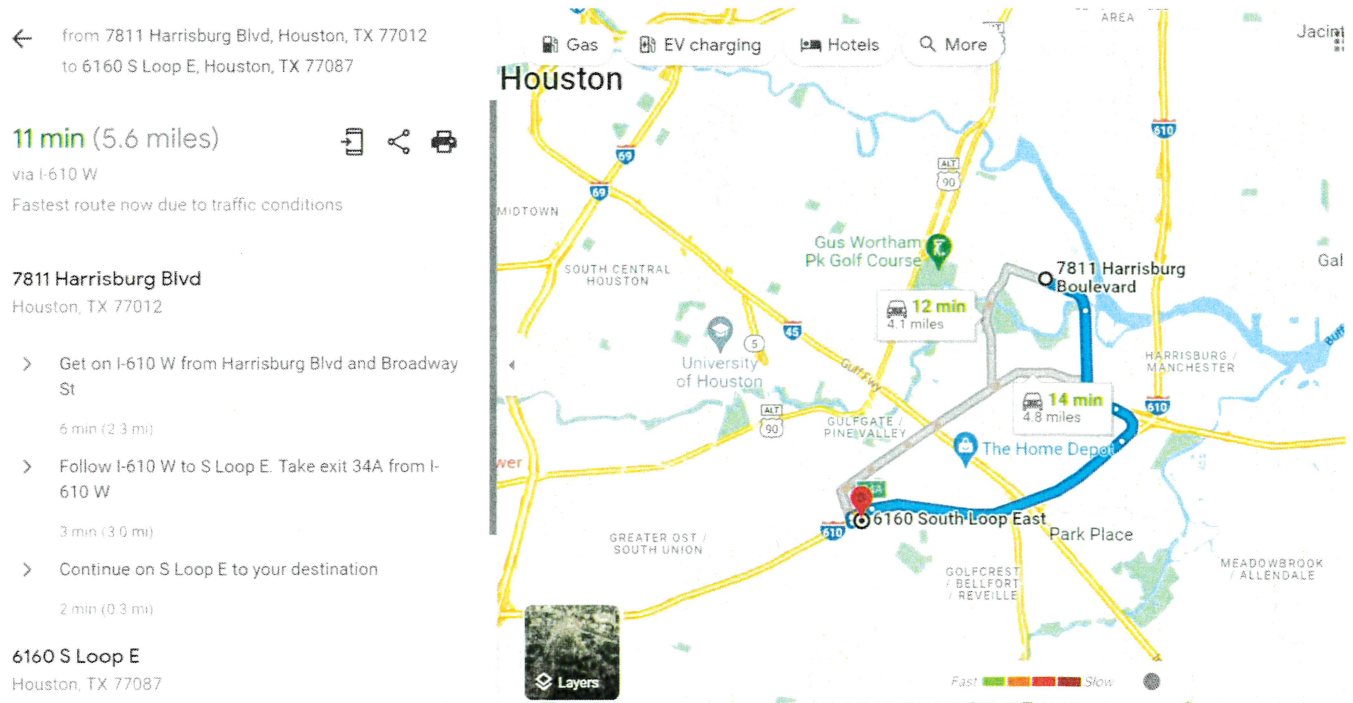
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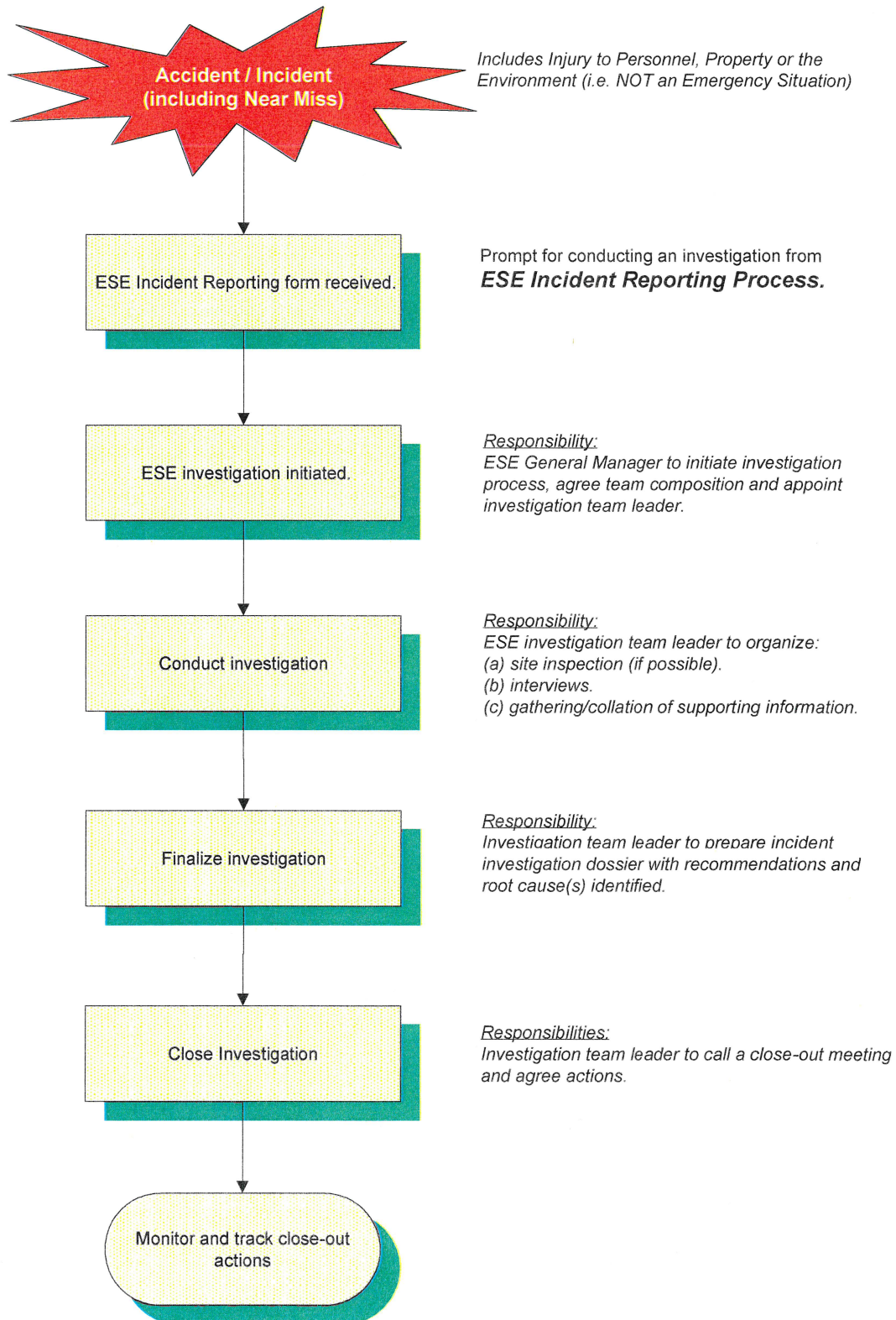
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APPENDIX B

Accident Investigation

ESE INCIDENT INVESTIGATION PROCESS



APPENDIX C

Equipment Calibration and Maintenance

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Appendix D

First Aid and Incident Report

FIRST AID AND INCIDENT DOCUMENTATION

[illegible]