# PHASE II ENVIRONMENTAL SITE ASSESSMENT
# 23rd Street Rehabilitation Project
# Galveston, Galveston County, Texas

SUBMITTED TO

Hollaway Environmental + Communications

2500 Summer Street, Suite 1130

Houston, Texas 77007

BY

HVJ ASSOCIATES, INC.

Houston, Texas

July 10, 2020

REPORT NO. HE2010043

HVJ ASSOCIATES

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July 10, 2020

Ms. Claire Garvin,
Vice President + Director of Environmental Services
Hollaway Environmental + Communications
2500 Summer Street, Suite 1130
Houston, Texas 77007

Re: Phase II Environmental Site Assessment (ESA)
23rd Street Rehabilitation Project
Owner: Galveston County
HVJ Project No. HE2010043

Dear Ms. Garvin:

Presented herein is our Phase II Environmental Site Assessment final report for the above referenced project. The assessment was performed in general accordance with our Proposal No. HE2010043 dated January 24, 2020 and the current ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."

This report presents HVJ Associates' understanding of the project's scope, the methodology we employed in executing the work, and the conclusions we reached subject to the limitations discussed in Section 6 of the report. It has been a pleasure to work with you on this project, and we appreciate the opportunity to be of service.

Sincerely,

**HVJ ASSOCIATES, INC.**
Texas Firm Registration No. F-000646

Edward Hawkinson, PG, MS, MBA
Senior Project Manager

Alexandra Milne, MS
Environmental Scientist

EH/AM

Copies submitted: 1 electronic copy

| The following lists the pages which complete this report: | |
|---|---|
| • Main Text – 9 pages | • Appendix B – 111 pages |
| • Plates – 5 pages | • Appendix C – 2 pages |
| • Appendix A – 23 pages | |

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## APPENDICES

## EXECUTIVE SUMMARY

HVJ Associates, Inc. has completed a Phase II ESA report for the 23rd Street Rehabilitation Project in Galveston, Texas. A site vicinity map is provided as Plate 1.

The objective of the assessment is to determine the nature of possible environmental contamination associated with several areas with historical recognized environmental conditions (HRECs) adjacent to the Subject Project Alignments reported in a Hollaway + Communications Phase I ESA for the Subject Project Alignment. Hollaway + Communications described several locations with historical recognized conditions (HRECs) adjacent to the Subject Project Alignment that in their opinion, require further environmental investigation. These locations, chemicals of concern, etc. provided in the Hollaway + Communications Phase I ESA report and are listed in Table 1.

This assessment was performed in general accordance with our HVJ Associates Proposal No. HE2010043 dated January 24, 2020 and current ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."

The available information for this Subject Project Alignment and subsurface assessment, conducted during May 2020 are summarized below:

- Twenty three borings were drilled using GeoProbe soil boring equipment at nine locations along the 23rd Street Subject Project Alignment.
- One soil sample from each boring was obtained for laboratory analysis of chemicals of concern (COCs). Groundwater was found in sufficient quantities for sampling at seven locations.
- The subsurface soils consist of (in general) brown to gray sand.
- Total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylene (BTEX) were found above the reporting limit in soil samples collected from borings EB1 and EB2 installed in two locations at the north end of the Subject Project Alignment.
- TPH and BTEX was found above the reporting limit in the groundwater sample collected from a temporary monitoring well installed in environmental boring EB1.
- Minor volatile organic compounds (VOCs) were found in soil samples collected from borings EB6 and EB7.

It is likely that the majority of the soils will be non-hazardous and possible that no soil excavated during construction along the Subject Project Alignment will require special handling. Based on the results of this assessment, we recommend no further soil testing along the Subject Project Alignment. This executive summary does not fully summarize our findings and opinions. Those findings and opinions are related through the full report only.

# 1. INTRODUCTION

## 1.1 Project Objective and Rationale

HVJ Associates, Inc. (HVJ Associates) was contracted by Hollaway Environmental + Communications to perform a Phase II Environmental Site Assessment (ESA) for a project involving street rehabilitation along 23rd Street from Broadway to Seawall Blvd. in Galveston, Texas. The proposed project includes roadway repaving with concrete and replacing sanitary sewer and some waterlines. The Subject Project Alignment consists of two-lane two-way paved roadway and adjacent right-of ways (ROWs). A site vicinity map is provided as Plate 1. The assessment was done in accordance with the current ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."

The objective of the assessment was to determine the nature of possible environmental contamination issues at the locations listed in Table 1 below, and their possible impact to the construction of the proposed project.

Hollaway Environmental + Communications conducted a Phase I ESA of the Subject Project Alignment and provided a report with their findings and recommendations. Hollaway described several locations with recognized environmental conditions (RECs) adjacent to the Subject Project Alignment that in their opinion require further environmental investigation. These locations, chemicals of concern, etc. are listed in the following table.

**Table 1**
**23rd Street Rehabilitation Project**
**Subject Project Area Sites with Recognized Environmental Conditions**

| Name and Location of Concern | Chemicals of Concern | Concern Documentation/Comment |
|---|---|---|
| **Brelands Service Station**<br>**2301 Avenue J Broadway** | BTEX+MTBE, TPH | Brelands Service Station is listed in the EDR Hist Auto database from 1969 and 1974. Due to the unknown nature of tank/leak issues at this location, there is a possibility of a petroleum hydrocarbons (and other) contaminants impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **Broadway Mobil/Citgo**<br>**Hayward Humble Service**<br>**2227/2223 Broadway Street** | BTEX+MTBE, TPH | This service station location is as inactive in the IHW Corrective Action database, in the PST Stage 2 database for vapor recovery and in the EDR Hist Auto database since 1969. Due to the unknown nature of tank/leak issues at this location, there is a possibility of a petroleum hydrocarbons (and other) contaminants impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **Pilgrim Cleaners**<br>**Pilgrim Launderers & Cleaners**<br>**Queen Cleaners Galveston**<br>**1210 23rd Street** | VOC, TPH | The Pilgrims Cleaners and Queen Cleaners Galveston facility at this location is a REC due to its listing in the historical dry cleaners database from 19776 through 2005 prior to its listing as a drop station. This location is also listed in the RCRA NonGen, US AIRS, FINDS, ECHO and Ind. Hazardous Waste databases. Spent halogenated solvents utilized at this facility include 1,1,1-trichloroethane, carbon tetrachloride and chlorinated, tetrachloroethylene, trichloroethylene and methylene chloride. There is a possibility of a dry cleaners solvents and other petroleum hydrocarbons contaminants to impact to Subject Project Alignment soil and/or groundwater from this facility. |

| Table 1<br>23rd Street Rehabilitation Project<br>Subject Project Area Sites with Recognized Environmental Conditions | | |
|---|---|---|
| **Name and Location of Concern** | **Chemicals of Concern** | **Concern Documentation/Comment** |
| **Coastal Community Church**<br>**1309 23rd Street** | BTEX+MTBE, TPH | The Coastal Community Church location is an HREC due to its listing in the LPST database with Priority Description: assessment incomplete, no apparent receptors impacted and Status: release determination. There is a possibility of a petroleum hydrocarbons to impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **RSI Beltone Office Apartment**<br>**1625 23rd Street**<br>**Montagne, Ernest R.**<br>**2302 Avenue O** | BTEX+MTBE, TPH | The RSI Beltone Office Apartment is an HREC due to its listing in the LPST database with Priority Description: groundwater impacted, no apparent threats or impacts to receptors and Status: final concurrence issued, case closed. This location is also listed in the EDR Hist Auto database from 1969 through 1975. Due to the unknown nature of some tank/leak issues at this location, there is a possibility of a petroleum hydrocarbons (and other) contaminants impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **Ansell Megna Investments**<br>**Housing for Humanity**<br>**1624 23rd Street** | BTEX+MTBE, TPH | The Ansell Megna Investments and Housing for Humanity location along 23rd Street is an HREC due to its listing in the LPST and PST databases. This site is listed in the LPST database with Priority Description: minor soil contamination and Status: final concurrence issued, case closed. One tank was removed from this location during 1996. There is a possibility of a petroleum hydrocarbons to impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **Edgewood Retirement Community**<br>**Old Buccaneer Hotel**<br>**2228 Seawall Boulevard** | BTEX+MTBE, TPH | This location is a CREC due to its listing in the LPST database with Priority Description: no groundwater impacted, no apparent threats or impacts to receptors and Status: final concurrence issued, case closed. This location is also listed in the VCP with institutional controls. One tank was removed from the ground at this location during 1999. There is a possibility of a petroleum hydrocarbons to impact to Subject Project Alignment soil and/or groundwater from these facilities. |
| **Wright's Gulf Service**<br>**1725 Tremont Street** | BTEX+MTBE, TPH | Wright's Gulf Service is listed in the EDR Hist Auto database from 1969 and 1974. Due to the unknown nature of tank/leak issues at this location, there is a possibility of a petroleum hydrocarbons (and other) contaminants impact to Subject Project Alignment soil and/or groundwater from this facility. |
| **Read Ollis Art**<br>**1911 Tremont Street** | VOC, TPH | This location is listed in the EDR Hist Cleaners database from 1969 through 1987. There is a possibility of a dry cleaners solvents and other petroleum hydrocarbons contaminants to impact to Subject Project Alignment soil and/or groundwater from this facility. |

## 1.2 Project Scope

The following tasks were performed:

1. Prepared a site-specific health and safety plan per 29 CFR 1910.120 (a copy of this document is not attached but is available upon request).

2. Coordinated City of Galveston (COG) permitting with COG engineering personnel.

3. Notified COG engineering 48 hours prior to commencing boring installation operations.

4. Installed 23 borings to depths ranging from 2 ft. to 12 ft. below the ground surface (bgs). We encountered auger refusal at one boring location. All borings were installed using GeoProbe equipment.

5. Performed soil sample field screening with an organic vapor meter (OVM) and obtained selected soil samples for subsequent laboratory analyses.

6. Obtained seven groundwater samples for laboratory analysis.

7. Prepared boring logs (copies of these logs are provided in Appendix A).

8. Submitted selected samples to ALS Houston, US Laboratory for the TPH and either benzene, toluene, ethylbenzene and xylene (BTEX), or VOC analysis. Laboratory results, QA/QC documentation, and chain-of-custody forms are provided in Appendix B.

9. Coordinated drilled cuttings and related drummed non-hazardous waste disposal. Project derived soil waste will be transported to a state approved landfill for disposal by an agent of Clean Earth Environmental Solutions Inc. Waste disposal documentation is provided in Appendix C.

10. Prepared this report summarizing our findings with conclusions and recommendations.

## 1.3 Basis of Report

Although this assessment has been a reasonably thorough attempt to identify soil and groundwater contamination, there is a possibility that contamination may have escaped detection due to the limitations of this assessment, or the presence of undetected and unreported environmental releases. HVJ Associates reserves the right to alter our conclusions and recommendations based on our review of any information obtained after the date of this report.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar conditions, by environmental consultants practicing in this or similar localities. No warranty, express or implied, is made as to the professional information included in this report.

## 1.4 Qualifications of Personnel

The primary assessor for this Phase II ESA is Mr. Edward Hawkinson, PG. Mr. Hawkinson holds BS and MS degrees in geology from The Ohio State University and the University of Cincinnati, respectively. Mr. Hawkinson is a registered Professional Geologist in Texas (license #45). His career encompasses a period exceeding 30 years involving environmental assessments, hydrogeology, water resource evaluations, and energy exploration.

## 2. BACKGROUND INFORMATION

### 2.1 Results of Previous Environmental Activity

HVJ Associates was provided with a summary of a Hollaway Environmental + Communications Phase I ESA report for the Subject Project Alignment and the EDR Radius Map Report for the Subject Project Alignment. Hollaway Environmental + Communications described several locations with RECs and/or HRECs adjacent to the Subject Project Alignments that in their opinion required further environmental investigation (see Table 1 for locations).

### 2.2 Planned Construction Description

The proposed project includes roadway repaving with concrete and replacing sanitary sewer and some waterlines along 23rd Street from Broadway to Seawall Blvd. The Subject Project Alignment is a two-lane two-way paved roadway.

## 3. INVESTIGATIVE METHODOLOGY

### 3.1 Soil Boring Sampling and Groundwater Activities

HVJ Associates performed this Phase II ESA in general accordance with the guidance contained in the American Society for Testing and Materials Designation E 1903-97 (2002), Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessments (ASTM E 1903). Prior to conducting our on-site assessment, COG maps were reviewed to determine the location of water and sewer utilities in the Subject Project Alignment area. Texas One-Call was contacted to mark other near surface utilities in the Subject Project Alignment area. Prior to mobilization, a site-specific health and safety plan was prepared in accordance with 29 CFR 1910.120. Prior to drilling and sample screening, all sampling equipment was thoroughly cleaned to prevent cross contamination. All environmental soil borings were installed by driller Mathers Environmental Drilling Inc. (MEDI) using GeoProbe sampling equipment.

Based on HVJ Associates' understanding of the proposed construction plans, borings were installed to total depths ranging from 2 ft. to 12 ft. bgs. At each location, a four-foot long soil core was collected from the ground surface to the top of the water bearing zone or to the approximate depth of construction. Borings were spaced at regular intervals on or very near the locations of the proposed construction activity. Borings location maps are attached (see Plates 2A, 2B, 2C and 2D). The soil borings were placed in the best practicable locations, considering the location of utilities and other site-specific conditions. Soil samples obtained were continuously examined for impact using visual and olfactory methods. Samples were also screened for organic vapors with a properly calibrated Organic Vapor Meter (OVM). Descriptions of the materials encountered are presented on the boring logs (Appendix A).

One soil sample was collected from each boring and submitted for laboratory analysis. OVM readings, along with visual evidence of impact and a physical description of the soils, were recorded on a boring log. The soil samples were obtained for laboratory analysis from the zone of the highest OVM readings. If there were no OVM readings (above background), a soil sample was obtained from the top of the water table. If no groundwater was encountered, the soil samples were obtained from the approximate depth of construction. Groundwater was encountered in sufficient quantity for sampling in seven environmental boring locations (EB1, EB5, EB8, EB14, EB15, EB18, and EB22). Clean PVC temporary monitoring wells were installed in these borings and a groundwater sample was collected using clean tubing and a peristaltic pump.

The on-site screening was conducted by cutting a sub-sample from each one-foot interval of core with a decontaminated knife. The soil samples were placed in airtight containers (sealable plastic bags), and held for approximately twenty minutes to allow the volatilization of organic vapors. At the end of this period, the headspace air inside the container was screened with the OVM. This was accomplished by inserting the OVM probe tip into a narrow opening in the plastic bag seal. The

headspace reading and corresponding depth was recorded on the boring log. Following OVM screening, one soil sample from each borehole was selected for laboratory analyses (OVM readings are presented on the boring logs). Samples were selected for analysis based on criteria described above. The samples selected were placed into pre-labeled laboratory-supplied glass jars, placed on water ice in an insulated cooler, and shipped under chain-of-custody to ALS Houston, US Laboratory for analysis. Subsequent to the drilling and sampling activities, each borehole was plugged from total depth to the surface using bentonite plugging material in accordance with standard drilling practice.

### 3.2 Laboratory Analysis Performed

ALS Houston, US Laboratory performed the following analyses on selected soil samples and a single groundwater sample collected from the environmental borings installed along the Subject Project Alignment as follows:

- TPH using TCEQ TX Method 1005; and
- Volatile Organic Compounds (VOCs) by EPA Method SW 846 8260C (for dry cleaners locations); or
- BTEX by EPA Method SW 846 8260C (for service station locations).

Copies of laboratory reports by ALS Houston, US Laboratory as well as the standard chain-of-custody documentation are included in Appendix B.

### 3.3 Waste Management

Assessment derived wastes (primarily soil cuttings) were generated in a small amounts during this assessment. Approximately five kilograms of soil cuttings were generated per boring. These materials were containerized and transported to HVJ Associates property for temporary storage until the results of the laboratory analyses were received in order to determine disposal requirements. Waste disposal is currently pending disposal approval. Landfill disposal of these materials will take place a standard waste manifest by an agent of Clean Earth Environmental Solutions Inc. once this approval has been obtained. Copies of the waste profile and manifest documents will be provided in Appendix C of the final version of this report.

## 4. ASSESSMENT RESULTS

### 4.1 Site Specific Soil Conditions

The subsurface soils consist of (in general) brown to gray sand. Specific soil descriptions and field observations for the soil borings are included on the boring logs contained in Appendix A. Soil classifications presented on the boring logs are based on visual field classification and have not been verified by geotechnical laboratory tests. Actual soil conditions may differ from those presented on the boring logs.

### 4.2 Analytical Findings – Soil

The soil sample collected from boring EB1 was found to contain TPH and BTEX at or above the reporting limit. The soil samples collected from borings EB2 was found to contain TPH and toluene, ethylbenzene and xylene at or above the reporting limit. The soil sample collected from environmental boring EB6 contained acetone at or above the reporting limit. The soil sample collected from environmental boring EB7 contained carbon disulfide at or above the reporting limit.

| Table 2 – TOTAL PETROLEUM HYDROCARBONS and VOCs<br>Soil Analytical Results and TCEQ PCLs<br>(results in mg/Kg for soil)<br>MOST ANALYSES REPORTED BELOW THE REPORTING LIMIT ARE NOT INCLUDED IN THIS TABLE | | | | | | |
|---|---|---|---|---|---|---|
| Parameter | BORING NUMBER AND DEPTH OF SAMPLE (FT.) | | | | TCEQ PCL | |
| | EB1 (0-4) | EB2 (0-4) | EB6 (4-8) | EB7 (4-8) | $^{TOT}SOIL_{COMB}$ | $^{GW}SOIL_{ING}$ |
| **TOTAL PETROLEUM HYDROCARONS by TCEQ TX 1005** | | | | | | |
| nC6-nC12 | **220** | **720** | <44 | <45 | 1,600 | 65 |
| >nC12-nC28 | **220** | **350** | <44 | <45 | 2,300 | 200 |
| >nC28-nC35 | <47 | <52 | <44 | <45 | 2,300 | 200 |
| Total Petroleum Hydrocarbons | **420** | **1,070** | <44 | <45 | 2,300 | 200 |
| **VOLATILE ORGANIC COMPOUNDS (EPA METHOD SW- 846 8021B)** | | | | | | |
| Benzene | **0.048** | <0.0041 | <0.0040 | <0.0044 | 1,200 | 0.026 |
| Ethylbenzene | 1.9 | 0.019 | <0.0040 | <0.0044 | 6,400 | 7.6 |
| Toluene | 0.0084 | <0.0041 | <0.0040 | <0.0044 | 5,900 | 8.2 |
| Xylene (total) | 5.8 | 0.011 | <0.0040 | <0.0044 | 6,000 | 120 |
| Acetone | NS | NS | 0.029 | <0.018 | 66,000 | 43 |
| Carbon disulfide | NS | NS | <0.0081 | 0.010 | 4,600 | 14 |

Table Notes:

1) Levels from the current TRRP Table 1 Tier Soil Protective Concentration Limits (PCLs) ($^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ exposure pathway for surface soil) for a 0.5-acre residential source area (the levels listed in **RED** exceeds the TRRP Table 1 PCL action level).
2) Results listed with the "<" symbol are below the reporting limit.
3) NS = sample was not analyzed for parameter.

### 4.3 Analytical Findings – Groundwater

The groundwater sample collected from a temporary monitoring well installed in environmental boring EB1 was found to contain TPH and several VOCs at or above the reporting limit.

| Table 3 – TOTAL PETROLEUM HYDROCARBONS and VOCs<br>Groundwater Analytical Results and TCEQ PCLs<br>(results in mg/L for groundwater)<br>MOST ANALYSES REPORTED BELOW THE REPORTING LIMIT ARE NOT INCLUDED IN THIS TABLE | | |
|---|---|---|
| Parameter | **BORING NUMBER** | **TCEQ PCL** |
| | **EB1** | **$^{GW}GW_{ING}$** |
| **TOTAL PETROLEUM HYDROCARONS by TCEQ TX 1005** | | |
| nC6-nC12 | **2.70** | 0.98 |
| >nC12-nC28 | <0.49 | 0.98 |
| >C28-C35 | <0.49 | 0.98 |
| Total Petroleum Hydrocarbons | 2.70 | |
| **VOLATILE ORGANIC COMPOUNDS (EPA METHOD SW8260C)** | | |
| Benzene | **0.59** | 0.005 |
| Ethylbenzene | 0.11 | 0.70 |
| Toluene | 0.023 | 1.00 |
| Xylenes | 0.15 | 10.00 |

Table Notes:

1) Levels from the current TRRP Table 3 Tier 1 Residential GW Protective Concentration Limits (PCLs) ($^{Gw}GW_{Ing}$ exposure pathway for groundwater). The levels listed in **RED** exceeds the TRRP Table 3 PCL action level.
2) Results listed with the "<" symbol are below the reporting limit.

Levels of TPH and of the VOCs benzene, ethylbenzene, xylenes and toluene were found in the groundwater sample collected from the temporary monitoring well installed in environmental boring EB1. Two of these levels (for benzene and TPH nC6-nC12) were found to be above the TRRP Table 3 Tier 1 Residential GW PCLs ($^{Gw}GW_{Ing}$) exposure pathway for groundwater. The $^{Gw}GW_{Ing}$ exposure pathway for groundwater was chosen for the tables because it tends to be a conservative number.

## 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary and Conclusions

The subsurface soils consist of (in general) brown to gray sand. We conclude that the soil sample collected from borings EB1 and EB2 was found to contain BTEX constituents and TPH above the reporting limit. These levels were compared to the current TRRP Table 1 Tier Soil Protective Concentration Limits (PCLs) ($^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ exposure pathway for surface soil) for a 0.5-acre residential source area. TPH and benzene found in the sample collected from boring EB1 and TPH found in the sample collected from boring EB2 exceed the TRRP PCL for the $^{GW}Soil_{Ing}$ exposure pathway but did not exceed the PCL for the $^{Tot}Soil_{Comb}$ exposure pathway. The VOC acetone was found above the reporting limit in boring EB6 and the VOC carbon sulfide was found

above the reporting limit in boring EB7. Both of these levels were below the TRRP Table 1 Tier Soil PCL $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ exposure pathway for surface soil.

A levels of TPH and of the VOCs benzene, ethylbenzene, xylenes and toluene were found in the groundwater sample collected from the temporary monitoring well installed in environmental boring EB1. Two of these levels (for nC6-nC12 and benzene) were found to be above the TRRP Table 3 Tier 1 Residential GW PCLs ($^{Gw}GW_{Ing}$) exposure pathway for groundwater.

### 5.2 Recommendations

Based on a comparison of analytical results detailed in this report with TCEQ Protective Concentration Levels and other information, we recommend no further environmental assessment along the Subject Project Alignment. We recommend additional worker protection at the north end of the Subject Project Alignment since contaminant levels are present. We recommend petroleum resistant piping and gaskets and other petroleum contaminated design considerations for this project at the north end of the Subject Project Alignment in the vicinity of environmental borings EB1 and EB2. In the event that environmental contamination is found during construction, we recommend worker health, safety, and other procedures in accordance with current COG design specifications.

## 6. LIMITATIONS

This report is an instrument of service of HVJ Associates, Inc. The report was prepared for and is intended for the exclusive use of Hollaway Environmental + Communications and the COG. The report's contents may not be relied upon by any other party without the express written permission of HVJ Associates. With the written permission of Hollaway Environmental + Communications and/or the COG, HVJ Associates will meet with a third party to help identify the additional services required, if any, to permit such third party to rely on the information contained in this report, but only to the same extent of Hollaway Environmental + Communications and/or the COG reliance, and subject to the same contractual, technological, and other limitations to which the COH has agreed.

The report's findings are based on conditions that existed on the date of HVJ Associates site visit and field assessment, and should not be relied upon to precisely represent conditions at any other time. The scope of service executed for this project is not equivalent to the scope of service needed to provide the information to completely establish the quantities and distribution of the petroleum hydrocarbon and/or other compounds affected soils present at the Subject Project Alignment. HVJ Associates has based the conclusions included in this report on its observation of existing Subject Project Alignment conditions, its interpretation of Subject Project Alignment history, its interpretation of the Subject Project Alignment usage information it was able to access, and the results of a limited program of subsurface exploration, sample screening and chemical analysis. The concentration of contaminants HVJ Associates measured may not be representative of conditions between locations sampled. Be aware that conditions may change at any sampled or unsampled location as a function of time, in response to natural conditions, chemical reactions, and/or other events.

Conclusions about Subject Project Alignment conditions under no circumstances comprise a warranty that conditions in all areas within the Subject Project Alignment (and below existing grade) are of the same quality as the Subject Project Alignment sampled.

The scope of service HVJ Associates implemented was based, in part, on the rules and regulations for contaminated sites as promulgated by the TCEQ and the COG. The rules, regulations, and guidelines by which this assessment was conducted were understood to be current or expected at the time HVJ Associates developed its proposal. Any additional information about this Subject Project Alignment that becomes available should be provided to HVJ Associates for its review, so HVJ Associates can modify its recommendations as necessary.

## 7. REFERENCES

The following references were used to compile this report:


- Bureau of Economic Geology, 1982. Geologic Atlas of Texas, Houston Sheet, University of Texas at Austin.
- USDA Soil Conservation Service (Natural Resources Conservation Service), Soil Survey of Galveston County, Texas.
- ASTM Standard Practice E-1903 – 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."
- TCEQ TRRP Residential Soil and Groundwater Protective Concentration Limits (PCLs).
- Hollaway + Communications Phase I Environmental Site Assessment, 23rd Street Rehabilitation Project.

**PLATES**


# 23rd Street Rehabilitation Project

2019 AERIAL PHOTOGRAPH WITH SITE SCHEMATIC

Galveston County, Texas

Created: 7/31/2019


HOLLAWAY
ENVIRONMENTAL + COMMUNICATIONS

N

0 260 520

Feet


**LEGEND:**

**BORING LOCATIONS**

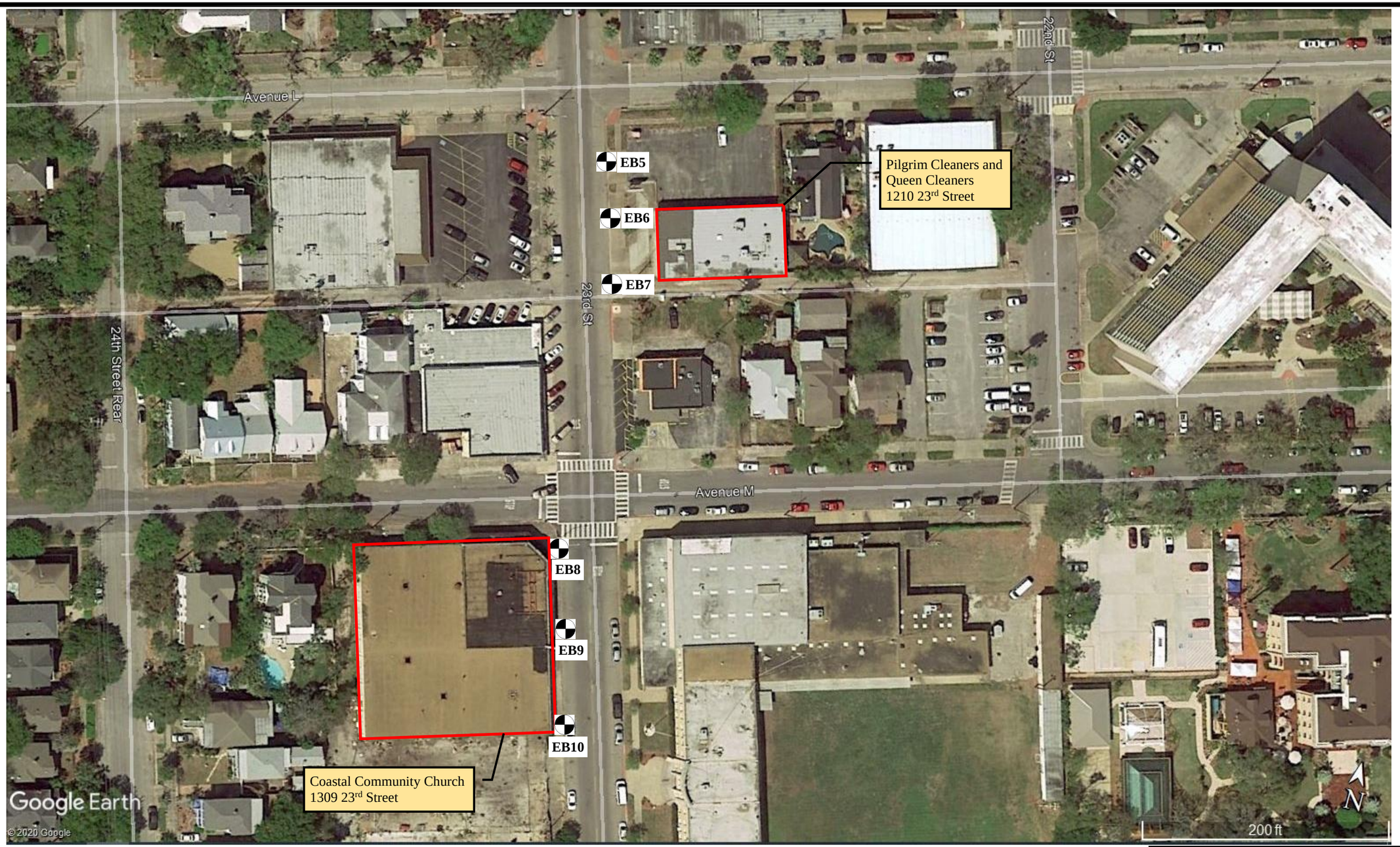
NOTE:
One temporary water well was installed at these two facilities.


HVJ ASSOCIATES
6120 S. Dairy Ashford Road
Houston, Texas 77072-1010
281.933.7388 Ph
281.933.7293 Fax


| DATE: 6/1/2020 | APPROVED BY: EH | PREPARED BY: AM |
|---|---|---|

PLAN OF BORINGS
PHASE II ESA – 23rd STREET REHABILITATION PROJECT

| PROJECT NO.: | DRAWING NO.: |
|---|---|
| HE2010043 | PLATE 2A |




**LEGEND:**

**BORING LOCATIONS**

NOTE:
Two temporary water wells were installed at these two facilities.

HVJ ASSOCIATES
6120 S. Dairy Ashford Road
Houston, Texas 77072-1010
281.933.7388 Ph
281.933.7293 Fax

| DATE: 6/1/2020 | APPROVED BY: EH | PREPARED BY: AM |
|---|---|---|

PLAN OF BORINGS
PHASE II ESA – 23rd STREET REHABILITATION PROJECT

| PROJECT NO.: | DRAWING NO.: |
|---|---|
| HE2010043 | PLATE 2B |


**LEGEND:**

**BORING LOCATIONS**

NOTE:
Two temporary water wells were installed at these three facilities.

HVJ ASSOCIATES
6120 S. Dairy Ashford Road
Houston, Texas 77072-1010
281.933.7388 Ph
281.933.7293 Fax

| DATE: 6/1/2020 | APPROVED BY: EH | PREPARED BY: AM |
|---|---|---|

PLAN OF BORINGS
PHASE II ESA – 23rd STREET REHABILITATION PROJECT

| PROJECT NO.: | DRAWING NO.: |
|---|---|
| HE2010043 | PLATE 2C |


**LEGEND:**

**BORING LOCATIONS**

NOTE:
Two temporary water were installed at these two facilities.

HVJ ASSOCIATES
6120 S. Dairy Ashford Road
Houston, Texas 77072-1010
281.933.7388 Ph
281.933.7293 Fax

| DATE: 6/1/2020 | APPROVED BY: EH | PREPARED BY: AM |
|---|---|---|

PLAN OF BORINGS
PHASE II ESA – 23rd STREET REHABILITATION PROJECT

| PROJECT NO.: | DRAWING NO.: |
|---|---|
| HE2010043 | PLATE 2D |

# APPENDIX A

# BORING LOGS

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB1 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 346.2 | | Dark gray Sandy Silt with roots | HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 346.2 | | | | |
| | | | | 346.2 | | | | |
| | | | | 346.2 | | Brown Sand | HYDROCARBON ODOR | |
| 5 | | | | 12.7 | | | | |
| | | | | 12.7 | | | | |
| | | | | 12.7 | | | | |
| | | | | 12.7 | | Brown Sand | HYDROCARBON ODOR | |
| | | | | 9.2 | | | | |
| 10 | | | | 9.2 | | | | |
| | | | | 9.2 | | | | |
| | | | | 9.2 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB10 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 7.9 | | Reddish gray Sand | NO HYDROCARBON ODOR | |
| | | | | 7.9 | | | | |
| | | | | 7.9 | | | | |
| | | | | 7.9 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 9.7 | | | | |
| | | | | 9.7 | | | | |
| | | | | 9.7 | | | | |
| | | | | 9.7 | | Greenish gray Sand | NO HYDROCARBON ODOR | |
| 10 | | | | 8.9 | | | | |
| | | | | 8.9 | | | | |
| | | | | 8.9 | | | | |
| | | | | 8.9 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB11 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/20/20 | Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM | Checked By: EM | Pack: From: - To: | |
| Drilling Co.: MEDI | Driller: | Seal: From: - To: | |
| Method: GEOPROBE | Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ 12.0 Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 5 | | Brown Sand with roots | NO HYDROCARBON ODOR | |
| | | | | 5 | | | | |
| | | | | 5 | | | | |
| | | | | 5 | | Gray Sand | NO HYDROCARBON ODOR | |
| 5 | | | | 5 | | | | |
| | | | | 5 | | | | |
| | | | | 5 | | | | |
| | | | | 5 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 8-12 FT.) | |
| | | | | 7.1 | | | | |
| 10 | | | | 7.1 | | | | |
| | | | | 7.1 | | | | |
| | | | | 7.1 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB12 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 8.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 8.4 | | | | |
| | | | | 8.4 | | | | |
| | | | | 8.4 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 9.5 | | | | |
| | | | | 9.5 | | | | |
| | | | | 9.5 | | | | |
| | | | | 9.5 | | Gray Sand | NO HYDROCARBON ODOR | |
| 10 | | | | 0.8 | | | | |
| | | | | 0.8 | | | | |
| | | | | 0.8 | | | | |
| | | | | 0.8 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB13 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | | | 25.5 | | Brown Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 25.5 | | | | |
| | | | | 25.5 | | | | |
| | | | | 25.5 | | Gray Sand | NO HYDROCARBON ODOR | |
| 5 | | | | 12.6 | | | | |
| | | | | 12.6 | | | | |
| | | | | 12.6 | | | | |
| | | | | 12.6 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 9.8 | | | | |
| 10 | | | | 9.8 | | | | |
| | | | | 9.8 | | | | |
| | | | | 9.8 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB14 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 8.6 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 8.6 | | | | |
| | | | | 8.6 | | | | |
| | | | | 8.6 | | Gray Sand | HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 12 | | | | |
| | | | | 12 | | | | |
| | | | | 12 | | | | |
| | | | | 12 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 5.8 | | | | |
| 10 | | | | 5.8 | | | | |
| | | | | 5.8 | | | | |
| | | | | 5.8 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB15 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/21/20 | Date Completed: 5/21/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM | Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI | Driller: | Seal: | From: - To: |
| Method: GEOPROBE | Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ 12.0 Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 10.1 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | Gray Sand | NO HYDROCARBON ODOR | |
| 5 | | | | 9.1 | | | | |
| | | | | 9.1 | | | | |
| | | | | 9.1 | | | | |
| | | | | 9.1 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 8-12 FT.) | |
| 10 | | | | 13 | | | | |
| | | | | 13 | | | | |
| | | | | 13 | | | | |
| | | | | 13 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB16 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | | | 11.3 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 11.3 | | | | |
| | | | | 11.3 | | | | |
| | | | | 11.3 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 13.8 | | | | |
| | | | | 13.8 | | | | |
| | | | | 13.8 | | | | |
| | | | | 13.8 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 12.7 | | | | |
| 10 | | | | 12.7 | | | | |
| | | | | 12.7 | | | | |
| | | | | 12.7 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB17 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/21/20 | Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM | Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI | Driller: | Seal: From: - To: | |
| Method: GEOPROBE | Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ 12.0 Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 9.1 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 9.1 | | | | |
| | | | | 9.1 | | | | |
| | | | | 9.1 | | | | |
| 5 | | | | 11 | | Gray Clay | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| | | | | 11 | | | | |
| | | | | 11 | | | | |
| | | | | 11 | | | | |
| 10 | | | | 10.3 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 10.3 | | | | |
| | | | | 10.3 | | | | |
| | | | | 10.3 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SUFRACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB18 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 7.6 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 12.1 | | | | |
| | | | | 12.1 | | | | |
| | | | | 12.1 | | | | |
| | | | | 12.1 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR | |
| | | | | 5.6 | | | | |
| 10 | | | | 5.6 | | | | |
| | | | | 5.6 | | | | |
| | | | | 5.6 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB19 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | | |
| | | | | 13.7 | | Brown Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 13.7 | | | | |
| | | | | 13.7 | | | | |
| | | | | 13.7 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR | |
| 5 | | | | 11.1 | | | 5 | |
| | | | | 11.1 | | | | |
| | | | | 11.1 | | | | |
| | | | | 11.1 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 10 | | | | |
| 10 | | | | 10 | | | 10 | |
| | | | | 10 | | | | |
| | | | | 10 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACEE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB2 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 225 | | Brown Sand | HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 225 | | | | |
| | | | | 225 | | | | |
| | | | | 225 | | Dark gray Sand | HYDROCARBON ODOR | |
| 5 | | | | 47.8 | | | | |
| | | | | 47.8 | | | | |
| | | | | 47.8 | | | | |
| | | | | 47.8 | | Brown Sand | HYDROCARBON ODOR | |
| | | | | 53 | | | | |
| 10 | | | | 53 | | | | |
| | | | | 53 | | | | |
| | | | | 53 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB20 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 11.8 | | Brown Sand with shell fragments | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 11.8 | | | | |
| | | | | 11.8 | | | | |
| | | | | 11.8 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR | |
| 5 | | | | 9.5 | | | | |
| | | | | 9.5 | | | | |
| | | | | 9.5 | | | | |
| | | | | 9.5 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR | |
| 10 | | | | 11.4 | | | | |
| | | | | 11.4 | | | | |
| | | | | 11.4 | | | | |
| | | | | 11.4 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB21 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/21/20 | Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM | Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI | Driller: | Seal: From: - To: | |
| Method: GEOPROBE | Equipment: | Grout: From: - To: | |
| Boring Depth: 2.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | | | | Auger refusal - gas line 0 | |
| | | | | | | | ***BORING TERMINATED AT 2 FEET BELOW GROUND SURFACE (BGS) | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB22 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 10.1 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | | | |
| 5 | | | | 10.1 | | Gray Sand with shell fragments | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | | | |
| | | | | 10.1 | | | | |
| 10 | | | | 6.4 | | Gray Clay | NO HYDROCARBON ODOR | |
| | | | | 6.4 | | | | |
| | | | | 6.4 | | | | |
| | | | | 6.4 | | ***BORING TERMINATED 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB23 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/21/20 / Date Completed: 5/21/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 7.9 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 7.9 | | | | |
| | | | | 7.9 | | | | |
| | | | | 7.9 | | | | |
| 5 | | | | 8.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 8.4 | | | | |
| | | | | 8.4 | | | | |
| | | | | 8.4 | | | | |
| | | | | 9.7 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 8-12 FT.) | |
| 10 | | | | 9.7 | | | | |
| | | | | 9.7 | | | | |
| | | | | 9.7 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB3 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 10.4 | | Brown Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 10.4 | | | | |
| | | | | 10.4 | | | | |
| | | | | 10.4 | | | | |
| 5 | | | | 7.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 7.4 | | | | |
| | | | | 7.4 | | | | |
| | | | | 7.4 | | | | |
| 10 | | | | 7.6 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB4 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/20/20 | Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM | Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI | Driller: | Seal: From: - To: | |
| Method: GEOPROBE | Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ 12.0 Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 10.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 10.4 | | | | |
| | | | | 10.4 | | | | |
| | | | | 10.4 | | | | |
| 5 | | | | 12.4 | | BrownSand | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| | | | | 12.4 | | | | |
| | | | | 12.4 | | | | |
| | | | | 12.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| 10 | | | | 12.2 | | | | |
| | | | | 12.2 | | | | |
| | | | | 12.2 | | | | |
| | | | | 12.2 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB5 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 9.4 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 9.4 | | | | |
| | | | | 9.4 | | | | |
| | | | | 9.4 | | Gray Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| 5 | | | | 11.8 | | | | |
| | | | | 11.8 | | | | |
| | | | | 11.8 | | | | |
| | | | | 11.8 | | Gray Sand | NO HYDROCARBON ODOR | |
| 10 | | | | 9.4 | | | | |
| | | | | 9.4 | | | | |
| | | | | 9.4 | | | | |
| | | | | 9.4 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB6 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 8.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 8.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 9.6 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 9.6 | | | | |
| | | | | 9.6 | | | | |
| | | | | 9.6 | | | | |
| 5 | | | | 10.7 | | Gray Sand with 1 mm sized gravels | NO HYDROCARBON ODOR (SAMPLE TO LAB 4-8 FT.) | |
| | | | | 10.7 | | | | |
| | | | | 10.7 | | | | |
| | | | | 10.7 | | Groundwater | | |
| | | | | | | ***BORING TERMINATED AT 8 FEET BELOW GROUND SURFACE (BGS) | | |

| | | | |
|---|---|---|---|
| Client: Hollaway Environmental + Communications | | Job No.: HE2010043 | Boring/Well: EB7 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | | Well Construction Data | |
| Date Started: 5/20/20 | Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM | Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI | Driller: | Seal: From: - To: | |
| Method: GEOPROBE | Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 | Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ | GW Level: ▼ 12.0 Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 11 | | Brown Sand | NO HYDROCARBON ODOR | |
| | | | | 11 | | | | |
| | | | | 11 | | | | |
| | | | | 11 | | Gray Sand | NO HYDROCARBON ODOR | |
| 5 | | | | 11.2 | | | | |
| | | | | 11.2 | | | | |
| | | | | 11.2 | | | | |
| | | | | 11.2 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 13.5 | | | | |
| 10 | | | | 13.5 | | | | |
| | | | | 13.5 | | | | |
| | | | | 13.5 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB8 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: 0.75" diam. 10' riser | From: 12 - To: 6 |
| Logged By: AM / Checked By: EH | Pack: bentonite | From: 12 - To: 0 |
| Drilling Co.: MEDI / Driller: | Seal: | From: - To: |
| Method: GEOPROBE / Equipment: | Grout: | From: - To: |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 15.3 | | Reddish Brown Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 15.3 | | | | |
| | | | | 15.3 | | | | |
| | | | | 15.3 | | Gray Sand with 1 mm-sized gravels | NO HYDROCARBON ODOR | |
| 5 | | | | 11.4 | | | | |
| | | | | 11.4 | | | | |
| | | | | 11.4 | | | | |
| | | | | 11.4 | | Gray Sand | NO HYDROCARBON ODOR | |
| | | | | 9.7 | | | | |
| 10 | | | | 9.7 | | | | |
| | | | | 9.7 | | | | |
| | | | | 9.7 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

LAEWNL03 HE2010043 PHASE II ESA 23RD STREET REHABILITATION PROJECT - GALVESTON.GPJ LAEWNL03.GDT 6/1/20

| | | |
|---|---|---|
| Client: Hollaway Environmental + Communications | Job No.: HE2010043 | Boring/Well: EB9 |
| Project: Phase II ESA - 23rd Street Rehabilitation Project | Well Construction Data | |
| Date Started: 5/20/20 / Date Completed: 5/20/20 | Screen: From: - To: | |
| Logged By: AM / Checked By: EH | Pack: From: - To: | |
| Drilling Co.: MEDI / Driller: | Seal: From: - To: | |
| Method: GEOPROBE / Equipment: | Grout: From: - To: | |
| Boring Depth: 12.0 / Ground Surface Elevation: | Inner Casing: | |
| Initial GW Level: ▽ / GW Level: ▼ 12.0 / Time/Date: | Outer Casing/Stick Up: | |

| Depth | Sample | Sample Number | Blow Count Rec./RQD | PID (ppm) | Lithology | Description | Remarks | Well Construction |
|---|---|---|---|---|---|---|---|---|
| 0 | | | | 11 | | Reddish Brown Sand | NO HYDROCARBON ODOR (SAMPLE TO LAB 0-4 FT.) | |
| | | | | 11 | | | | |
| | | | | 11 | | | | |
| | | | | 11 | | Gray Sand | NO HYDROCARBON ODOR | |
| 5 | | | | 7.6 | | | | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | | | |
| | | | | 7.6 | | Gray Sand | NO HYDROCARBON ODOR | |
| 10 | | | | 9 | | | | |
| | | | | 9 | | | | |
| | | | | 9 | | | | |
| | | | | 9 | | ***BORING TERMINATED AT 12 FEET BELOW GROUND SURFACE (BGS) | | |

LAEWNL03 HE2010043 PHASE II ESA 23RD STREET REHABILITATION PROJECT - GALVESTON.GPJ LAEWNL03.GDT 6/1/20

# APPENDIX B

# ANALYTICAL LAB REPORT/CHAIN OF CUSTODY DOCUMENTATION

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887

June 01, 2020

Ed Hawkinson
HVJ Associates
6120 S. Dairy Ashford Rd.
Houston, TX 770721010

Work Order: **HS20050835**

Laboratory Results for: **Phase II ESA project**

Dear Ed,

ALS Environmental received 32 sample(s) on May 21, 2020 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

**Generated By: JUMOKE.LAWAL**
RJ Modashia
Project Manager

**Client:** HVJ Associates
**Project:** Phase II ESA project
**Work Order:** HS20050835

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20050835-01 | EB-7 (8-12) | Soil | | 20-May-2020 11:26 | 21-May-2020 15:57 | |
| HS20050835-02 | EB-8 (0-4) | Soil | | 20-May-2020 11:45 | 21-May-2020 15:57 | |
| HS20050835-03 | EB-9 (0-4) | Soil | | 20-May-2020 12:18 | 21-May-2020 15:57 | |
| HS20050835-04 | EB-10 (4-8) | Soil | | 20-May-2020 12:35 | 21-May-2020 15:57 | |
| HS20050835-05 | EB-11 (8-12) | Soil | | 20-May-2020 13:51 | 21-May-2020 15:57 | |
| HS20050835-06 | EB-14 (4-8) | Soil | | 20-May-2020 13:00 | 21-May-2020 15:57 | |
| HS20050835-07 | EB-1 (0-4) | Soil | | 20-May-2020 09:16 | 21-May-2020 15:57 | |
| HS20050835-08 | EB-2 (0-4) | Soil | | 20-May-2020 09:45 | 21-May-2020 15:57 | |
| HS20050835-09 | EB-3 (0-4) | Soil | | 20-May-2020 09:57 | 21-May-2020 15:57 | |
| HS20050835-10 | EB-4 (4-8) | Soil | | 20-May-2020 10:24 | 21-May-2020 15:57 | |
| HS20050835-11 | EB-5 (4-8) | Soil | | 20-May-2020 10:44 | 21-May-2020 15:57 | |
| HS20050835-12 | EB-6 (4-8) | Soil | | 20-May-2020 11:08 | 21-May-2020 15:57 | |
| HS20050835-13 | EB-1 (8-12) | Water | | 20-May-2020 09:34 | 21-May-2020 15:57 | |
| HS20050835-14 | EB-5 (8-12) | Water | | 20-May-2020 10:51 | 21-May-2020 15:57 | |
| HS20050835-15 | EB-8 (8-12) | Water | | 20-May-2020 11:58 | 21-May-2020 15:57 | |
| HS20050835-16 | EB-13 (0-4) | Soil | | 21-May-2020 09:00 | 21-May-2020 15:57 | |
| HS20050835-17 | EB-15 (8-12) | Soil | | 21-May-2020 09:26 | 21-May-2020 15:57 | |
| HS20050835-18 | EB-15 (8-12) Water | Water | | 21-May-2020 09:26 | 21-May-2020 15:57 | |
| HS20050835-19 | EB-16 (4-8) | Soil | | 21-May-2020 09:51 | 21-May-2020 15:57 | |
| HS20050835-20 | EB-17 (4-8) | Soil | | 21-May-2020 10:07 | 21-May-2020 15:57 | |
| HS20050835-21 | EB-18 (4-8) | Soil | | 21-May-2020 10:26 | 21-May-2020 15:57 | |
| HS20050835-22 | EB-18 (8-12) Water | Water | | 21-May-2020 11:32 | 21-May-2020 15:57 | |
| HS20050835-23 | EB-19 (0-4) | Soil | | 21-May-2020 10:51 | 21-May-2020 15:57 | |
| HS20050835-24 | EB-20 (0-4) | Soil | | 21-May-2020 11:06 | 21-May-2020 15:57 | |
| HS20050835-25 | EB-23 (8-12) | Soil | | 21-May-2020 11:29 | 21-May-2020 15:57 | |
| HS20050835-26 | EB-22 (4-8) | Soil | | 21-May-2020 11:50 | 21-May-2020 15:57 | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**Work Order:** HS20050835

## SAMPLE SUMMARY

| Lab Samp ID | Client Sample ID | Matrix | TagNo | Collection Date | Date Received | Hold |
|---|---|---|---|---|---|---|
| HS20050835-27 | EB-22 (8-12) Water | Water | | 21-May-2020 11:54 | 21-May-2020 15:57 | ☐ |
| HS20050835-28 | Composite I | Soil | | 21-May-2020 12:00 | 21-May-2020 15:57 | ☐ |
| HS20050835-29 | Composite II | Soil | | 21-May-2020 12:00 | 21-May-2020 15:57 | ☐ |
| HS20050835-30 | Composite III | Soil | | 21-May-2020 12:00 | 21-May-2020 15:57 | ☐ |
| HS20050835-31 | EB-12 | Soil | | 20-May-2020 13:34 | 21-May-2020 15:57 | ☐ |
| HS20050835-32 | EB-14 Water | Water | | 20-May-2020 12:56 | 21-May-2020 15:57 | ☐ |

**Client:** HVJ Associates **CASE NARRATIVE**
**Project:** Phase II ESA project
**Work Order:** HS20050835

## Work Order Comments

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

## GC Semivolatiles by Method TX1005

### Batch ID: 153754

**Sample ID: LCS-153754**

• Insufficient sample received to perform MS/MSD. An LCS/LCSD was performed as batch quality control.

### Batch ID: 153758

**Sample ID: HS20050821-01MS**

• MS and MSD are for an unrelated sample

### Batch ID: 153801

**Sample ID: LCSD-153801**

• LCSD RPD was above the upper control limit. The individual recoveries were in control. (>nC12 to nC28)

### Batch ID: 153823

**Sample ID: HS20050825-05MS**

• MS and MSD are for an unrelated sample (>nC12 to nC28)

## GCMS Semivolatiles by Method SW1311/8270

### Batch ID: 153878

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## GCMS Volatiles by Method SW8260

### Batch ID: 153832

**Sample ID: HS20050892-05MS**

• MS is for an unrelated sample

### Batch ID: R362107

**Sample ID: EB-1 (8-12) (HS20050835-13)**

• Lowest practical dilution due to sample matrix.

**Sample ID: HS20050884-01MS**

• MS and MSD are for an unrelated sample

### Batch ID: R362162

**Sample ID: HS20050881-03MS**

• MS and MSD are for an unrelated sample

**Client:** HVJ Associates **CASE NARRATIVE**
**Project:** Phase II ESA project
**Work Order:** HS20050835

## GCMS Volatiles by Method SW8260

### Batch ID: R362167

**Sample ID: HS20050905-01MSD**

- MSD is for an unrelated sample

### Batch ID: R362239

**Sample ID: HS20050852-02MS**

- MS and MSD are for an unrelated sample

### Batch ID: R362160,R362241

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## Metals by Method SW7470

### Batch ID: 153922

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## Metals by Method SW1311/6020

### Batch ID: 153850

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method SW3550

### Batch ID: R362086,R362174

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method SW9045D

### Batch ID: R362147

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method SW7.3.3.2

### Batch ID: R362025

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method SW7.3.4.2

### Batch ID: R362020

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

## WetChemistry by Method ASTM D92-12b

### Batch ID: R361984

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-7 (8-12)
Collection Date: 20-May-2020 11:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-01
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,1,2,2-Tetrachloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,1,2-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,1-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,1-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2,4-Trichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2-Dibromo-3-chloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2-Dibromoethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,2-Dichloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,3-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 1,4-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| 2-Butanone | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| 2-Hexanone | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| 4-Methyl-2-pentanone | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| Acetone | < 0.018 | | 0.018 | mg/Kg | 1 | 27-May-2020 16:55 |
| Benzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Bromodichloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Bromoform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Bromomethane | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| **Carbon disulfide** | **0.010** | | **0.0088** | **mg/Kg** | 1 | 27-May-2020 16:55 |
| Carbon tetrachloride | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Chlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Chloroethane | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| Chloroform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Chloromethane | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| cis-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| cis-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Cyclohexane | < 0.0044 | n | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Dibromochloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Dichlorodifluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Ethylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Isopropylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| m,p-Xylene | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| Methyl acetate | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Methyl tert-butyl ether | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Methylcyclohexane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-7 (8-12)
Collection Date: 20-May-2020 11:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-01
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 16:55 |
| o-Xylene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Styrene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Tetrachloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Toluene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| trans-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| trans-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Trichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Trichlorofluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| Vinyl chloride | < 0.0018 | | 0.0018 | mg/Kg | 1 | 27-May-2020 16:55 |
| Xylenes, Total | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 16:55 |
| *Surr: 1,2-Dichloroethane-d4* | *94.8* | | *70-126* | *%REC* | *1* | *27-May-2020 16:55* |
| *Surr: 4-Bromofluorobenzene* | *99.4* | | *70-130* | *%REC* | *1* | *27-May-2020 16:55* |
| *Surr: Dibromofluoromethane* | *93.5* | | *70-130* | *%REC* | *1* | *27-May-2020 16:55* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 16:55* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 45 | | 45 | mg/Kg | 1 | 22-May-2020 21:44 |
| >nC12 to nC28 | < 45 | | 45 | mg/Kg | 1 | 22-May-2020 21:44 |
| >nC28 to nC35 | < 45 | | 45 | mg/Kg | 1 | 22-May-2020 21:44 |
| Total Petroleum Hydrocarbon | < 45 | | 45 | mg/Kg | 1 | 22-May-2020 21:44 |
| *Surr: 2-Fluorobiphenyl* | *95.9* | | *70-130* | *%REC* | *1* | *22-May-2020 21:44* |
| *Surr: Trifluoromethyl benzene* | *103* | | *70-130* | *%REC* | *1* | *22-May-2020 21:44* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **21.1** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-8 (0-4)
Collection Date: 20-May-2020 11:45

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-02
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| Ethylbenzene | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| m,p-Xylene | < 0.0098 | | 0.0098 | mg/Kg | 1 | 27-May-2020 04:00 |
| Methyl tert-butyl ether | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| o-Xylene | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| Toluene | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| Xylenes, Total | < 0.0049 | | 0.0049 | mg/Kg | 1 | 27-May-2020 04:00 |
| *Surr: 1,2-Dichloroethane-d4* | *92.0* | | *70-126* | *%REC* | *1* | *27-May-2020 04:00* |
| *Surr: 4-Bromofluorobenzene* | *101* | | *70-130* | *%REC* | *1* | *27-May-2020 04:00* |
| *Surr: Dibromofluoromethane* | *95.6* | | *70-130* | *%REC* | *1* | *27-May-2020 04:00* |
| *Surr: Toluene-d8* | *107* | | *70-130* | *%REC* | *1* | *27-May-2020 04:00* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 46 | | 46 | mg/Kg | 1 | 22-May-2020 22:14 |
| >nC12 to nC28 | < 46 | | 46 | mg/Kg | 1 | 22-May-2020 22:14 |
| >nC28 to nC35 | < 46 | | 46 | mg/Kg | 1 | 22-May-2020 22:14 |
| Total Petroleum Hydrocarbon | < 46 | | 46 | mg/Kg | 1 | 22-May-2020 22:14 |
| *Surr: 2-Fluorobiphenyl* | *85.5* | | *70-130* | *%REC* | *1* | *22-May-2020 22:14* |
| *Surr: Trifluoromethyl benzene* | *92.6* | | *70-130* | *%REC* | *1* | *22-May-2020 22:14* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **16.9** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-9 (0-4)
Collection Date: 20-May-2020 12:18

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-03
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| Ethylbenzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| m,p-Xylene | < 0.0092 | | 0.0092 | mg/Kg | 1 | 27-May-2020 04:25 |
| Methyl tert-butyl ether | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| o-Xylene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| Toluene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| Xylenes, Total | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:25 |
| *Surr: 1,2-Dichloroethane-d4* | *91.3* | | *70-126* | *%REC* | *1* | *27-May-2020 04:25* |
| *Surr: 4-Bromofluorobenzene* | *97.3* | | *70-130* | *%REC* | *1* | *27-May-2020 04:25* |
| *Surr: Dibromofluoromethane* | *91.6* | | *70-130* | *%REC* | *1* | *27-May-2020 04:25* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 04:25* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 41 | | 41 | mg/Kg | 1 | 22-May-2020 22:43 |
| >nC12 to nC28 | < 41 | | 41 | mg/Kg | 1 | 22-May-2020 22:43 |
| >nC28 to nC35 | < 41 | | 41 | mg/Kg | 1 | 22-May-2020 22:43 |
| Total Petroleum Hydrocarbon | < 41 | | 41 | mg/Kg | 1 | 22-May-2020 22:43 |
| *Surr: 2-Fluorobiphenyl* | *82.8* | | *70-130* | *%REC* | *1* | *22-May-2020 22:43* |
| *Surr: Trifluoromethyl benzene* | *92.7* | | *70-130* | *%REC* | *1* | *22-May-2020 22:43* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **13.7** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-10 (4-8)
Collection Date: 20-May-2020 12:35

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-04
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| Ethylbenzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| m,p-Xylene | < 0.0093 | | 0.0093 | mg/Kg | 1 | 27-May-2020 04:50 |
| Methyl tert-butyl ether | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| o-Xylene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| Toluene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| Xylenes, Total | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 04:50 |
| *Surr: 1,2-Dichloroethane-d4* | *92.8* | | *70-126* | *%REC* | *1* | *27-May-2020 04:50* |
| *Surr: 4-Bromofluorobenzene* | *97.6* | | *70-130* | *%REC* | *1* | *27-May-2020 04:50* |
| *Surr: Dibromofluoromethane* | *93.0* | | *70-130* | *%REC* | *1* | *27-May-2020 04:50* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 04:50* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 42 | | 42 | mg/Kg | 1 | 22-May-2020 23:12 |
| >nC12 to nC28 | < 42 | | 42 | mg/Kg | 1 | 22-May-2020 23:12 |
| >nC28 to nC35 | < 42 | | 42 | mg/Kg | 1 | 22-May-2020 23:12 |
| Total Petroleum Hydrocarbon | < 42 | | 42 | mg/Kg | 1 | 22-May-2020 23:12 |
| *Surr: 2-Fluorobiphenyl* | *80.6* | | *70-130* | *%REC* | *1* | *22-May-2020 23:12* |
| *Surr: Trifluoromethyl benzene* | *91.1* | | *70-130* | *%REC* | *1* | *22-May-2020 23:12* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **17.6** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-11 (8-12)
Collection Date: 20-May-2020 13:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-05
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| Ethylbenzene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| m,p-Xylene | < 0.0092 | | 0.0092 | mg/Kg | 1 | 27-May-2020 05:15 |
| Methyl tert-butyl ether | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| o-Xylene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| Toluene | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| Xylenes, Total | < 0.0046 | | 0.0046 | mg/Kg | 1 | 27-May-2020 05:15 |
| *Surr: 1,2-Dichloroethane-d4* | *93.1* | | *70-126* | *%REC* | *1* | *27-May-2020 05:15* |
| *Surr: 4-Bromofluorobenzene* | *98.4* | | *70-130* | *%REC* | *1* | *27-May-2020 05:15* |
| *Surr: Dibromofluoromethane* | *93.1* | | *70-130* | *%REC* | *1* | *27-May-2020 05:15* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 05:15* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 00:39 |
| >nC12 to nC28 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 00:39 |
| >nC28 to nC35 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 00:39 |
| Total Petroleum Hydrocarbon | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 00:39 |
| *Surr: 2-Fluorobiphenyl* | *76.6* | | *70-130* | *%REC* | *1* | *23-May-2020 00:39* |
| *Surr: Trifluoromethyl benzene* | *93.1* | | *70-130* | *%REC* | *1* | *23-May-2020 00:39* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **19.1** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-14 (4-8)
Collection Date: 20-May-2020 13:00

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-06
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| Ethylbenzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| m,p-Xylene | < 0.0084 | | 0.0084 | mg/Kg | 1 | 27-May-2020 05:40 |
| Methyl tert-butyl ether | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| o-Xylene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| Toluene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| Xylenes, Total | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 05:40 |
| *Surr: 1,2-Dichloroethane-d4* | *89.8* | | *70-126* | *%REC* | *1* | *27-May-2020 05:40* |
| *Surr: 4-Bromofluorobenzene* | *97.1* | | *70-130* | *%REC* | *1* | *27-May-2020 05:40* |
| *Surr: Dibromofluoromethane* | *94.1* | | *70-130* | *%REC* | *1* | *27-May-2020 05:40* |
| *Surr: Toluene-d8* | *104* | | *70-130* | *%REC* | *1* | *27-May-2020 05:40* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 01:09 |
| >nC12 to nC28 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 01:09 |
| >nC28 to nC35 | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 01:09 |
| Total Petroleum Hydrocarbon | < 43 | | 43 | mg/Kg | 1 | 23-May-2020 01:09 |
| *Surr: 2-Fluorobiphenyl* | *70.8* | | *70-130* | *%REC* | *1* | *23-May-2020 01:09* |
| *Surr: Trifluoromethyl benzene* | *88.7* | | *70-130* | *%REC* | *1* | *23-May-2020 01:09* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **20.9** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-1 (0-4)
Collection Date: 20-May-2020 09:16

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-07
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| **Benzene** | **0.048** | | **0.0045** | **mg/Kg** | 1 | 27-May-2020 06:05 |
| **Ethylbenzene** | **1.9** | | **0.22** | **mg/Kg** | 50 | 27-May-2020 15:38 |
| **m,p-Xylene** | **5.3** | | **0.45** | **mg/Kg** | 50 | 27-May-2020 15:38 |
| Methyl tert-butyl ether | < 0.0045 | | 0.0045 | mg/Kg | 1 | 27-May-2020 06:05 |
| **o-Xylene** | **0.45** | | **0.22** | **mg/Kg** | 50 | 27-May-2020 15:38 |
| **Toluene** | **0.0084** | | **0.0045** | **mg/Kg** | 1 | 27-May-2020 06:05 |
| **Xylenes, Total** | **5.8** | | **0.22** | **mg/Kg** | 50 | 27-May-2020 15:38 |
| *Surr: 1,2-Dichloroethane-d4* | *88.6* | | *70-126* | *%REC* | *1* | *27-May-2020 06:05* |
| *Surr: 1,2-Dichloroethane-d4* | *85.5* | | *70-126* | *%REC* | *50* | *27-May-2020 15:38* |
| *Surr: 4-Bromofluorobenzene* | *105* | | *70-130* | *%REC* | *1* | *27-May-2020 06:05* |
| *Surr: 4-Bromofluorobenzene* | *97.8* | | *70-130* | *%REC* | *50* | *27-May-2020 15:38* |
| *Surr: Dibromofluoromethane* | *92.9* | | *70-130* | *%REC* | *1* | *27-May-2020 06:05* |
| *Surr: Dibromofluoromethane* | *83.5* | | *70-130* | *%REC* | *50* | *27-May-2020 15:38* |
| *Surr: Toluene-d8* | *109* | | *70-130* | *%REC* | *1* | *27-May-2020 06:05* |
| *Surr: Toluene-d8* | *98.1* | | *70-130* | *%REC* | *50* | *27-May-2020 15:38* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| **nC6 to nC12** | **220** | | **47** | **mg/Kg** | 1 | 23-May-2020 01:38 |
| **>nC12 to nC28** | **200** | | **47** | **mg/Kg** | 1 | 23-May-2020 01:38 |
| >nC28 to nC35 | < 47 | | 47 | mg/Kg | 1 | 23-May-2020 01:38 |
| **Total Petroleum Hydrocarbon** | **420** | | **47** | **mg/Kg** | 1 | 23-May-2020 01:38 |
| *Surr: 2-Fluorobiphenyl* | *93.4* | | *70-130* | *%REC* | *1* | *23-May-2020 01:38* |
| *Surr: Trifluoromethyl benzene* | *84.8* | | *70-130* | *%REC* | *1* | *23-May-2020 01:38* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **10.9** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-2 (0-4)
Collection Date: 20-May-2020 09:45

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-08
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 06:29 |
| **Ethylbenzene** | **0.019** | | **0.0041** | **mg/Kg** | 1 | 27-May-2020 06:29 |
| **m,p-Xylene** | **0.0089** | | **0.0082** | **mg/Kg** | 1 | 27-May-2020 06:29 |
| Methyl tert-butyl ether | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 06:29 |
| o-Xylene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 06:29 |
| Toluene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 06:29 |
| **Xylenes, Total** | **0.011** | | **0.0041** | **mg/Kg** | 1 | 27-May-2020 06:29 |
| *Surr: 1,2-Dichloroethane-d4* | *89.6* | | *70-126* | *%REC* | *1* | *27-May-2020 06:29* |
| *Surr: 4-Bromofluorobenzene* | *109* | | *70-130* | *%REC* | *1* | *27-May-2020 06:29* |
| *Surr: Dibromofluoromethane* | *90.5* | | *70-130* | *%REC* | *1* | *27-May-2020 06:29* |
| *Surr: Toluene-d8* | *110* | | *70-130* | *%REC* | *1* | *27-May-2020 06:29* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| **nC6 to nC12** | **720** | | **52** | **mg/Kg** | 1 | 23-May-2020 02:07 |
| **>nC12 to nC28** | **350** | | **52** | **mg/Kg** | 1 | 23-May-2020 02:07 |
| >nC28 to nC35 | < 52 | | 52 | mg/Kg | 1 | 23-May-2020 02:07 |
| **Total Petroleum Hydrocarbon** | **1,070** | | **52** | **mg/Kg** | 1 | 23-May-2020 02:07 |
| *Surr: 2-Fluorobiphenyl* | *101* | | *70-130* | *%REC* | *1* | *23-May-2020 02:07* |
| *Surr: Trifluoromethyl benzene* | *92.5* | | *70-130* | *%REC* | *1* | *23-May-2020 02:07* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **12.1** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-3 (0-4)
Collection Date: 20-May-2020 09:57

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-09
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| Ethylbenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| m,p-Xylene | < 0.0080 | | 0.0080 | mg/Kg | 1 | 27-May-2020 09:49 |
| Methyl tert-butyl ether | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| o-Xylene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| Toluene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| Xylenes, Total | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 09:49 |
| *Surr: 1,2-Dichloroethane-d4* | *92.9* | | *70-126* | *%REC* | *1* | *27-May-2020 09:49* |
| *Surr: 4-Bromofluorobenzene* | *97.9* | | *70-130* | *%REC* | *1* | *27-May-2020 09:49* |
| *Surr: Dibromofluoromethane* | *92.9* | | *70-130* | *%REC* | *1* | *27-May-2020 09:49* |
| *Surr: Toluene-d8* | *102* | | *70-130* | *%REC* | *1* | *27-May-2020 09:49* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 39 | | 39 | mg/Kg | 1 | 23-May-2020 02:36 |
| >nC12 to nC28 | < 39 | | 39 | mg/Kg | 1 | 23-May-2020 02:36 |
| >nC28 to nC35 | < 39 | | 39 | mg/Kg | 1 | 23-May-2020 02:36 |
| Total Petroleum Hydrocarbon | < 39 | | 39 | mg/Kg | 1 | 23-May-2020 02:36 |
| *Surr: 2-Fluorobiphenyl* | *70.1* | | *70-130* | *%REC* | *1* | *23-May-2020 02:36* |
| *Surr: Trifluoromethyl benzene* | *80.0* | | *70-130* | *%REC* | *1* | *23-May-2020 02:36* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **10.4** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-4 (4-8)
Collection Date: 20-May-2020 10:24

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-10
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| Ethylbenzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| m,p-Xylene | < 0.0085 | | 0.0085 | mg/Kg | 1 | 27-May-2020 10:14 |
| Methyl tert-butyl ether | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| o-Xylene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| Toluene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| Xylenes, Total | < 0.0042 | | 0.0042 | mg/Kg | 1 | 27-May-2020 10:14 |
| *Surr: 1,2-Dichloroethane-d4* | *93.6* | | *70-126* | *%REC* | *1* | *27-May-2020 10:14* |
| *Surr: 4-Bromofluorobenzene* | *95.8* | | *70-130* | *%REC* | *1* | *27-May-2020 10:14* |
| *Surr: Dibromofluoromethane* | *92.7* | | *70-130* | *%REC* | *1* | *27-May-2020 10:14* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 10:14* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 10:15 |
| >nC12 to nC28 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 10:15 |
| >nC28 to nC35 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 10:15 |
| Total Petroleum Hydrocarbon | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 10:15 |
| *Surr: 2-Fluorobiphenyl* | *72.0* | | *70-130* | *%REC* | *1* | *27-May-2020 10:15* |
| *Surr: Trifluoromethyl benzene* | *80.0* | | *70-130* | *%REC* | *1* | *27-May-2020 10:15* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **17.4** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-5 (4-8)
Collection Date: 20-May-2020 10:44

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-11
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,1,2,2-Tetrachloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,1,2-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,1-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,1-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2,4-Trichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2-Dibromo-3-chloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2-Dibromoethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,2-Dichloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,3-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 1,4-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| 2-Butanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| 2-Hexanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| 4-Methyl-2-pentanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| Acetone | < 0.018 | | 0.018 | mg/Kg | 1 | 27-May-2020 17:20 |
| Benzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Bromodichloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Bromoform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Bromomethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| Carbon disulfide | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| Carbon tetrachloride | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Chlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Chloroethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| Chloroform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Chloromethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| cis-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| cis-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Cyclohexane | < 0.0044 | n | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Dibromochloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Dichlorodifluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Ethylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Isopropylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| m,p-Xylene | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| Methyl acetate | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Methyl tert-butyl ether | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Methylcyclohexane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-5 (4-8)
Collection Date: 20-May-2020 10:44

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-11
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 17:20 |
| o-Xylene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Styrene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Tetrachloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Toluene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| trans-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| trans-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Trichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Trichlorofluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| Vinyl chloride | < 0.0018 | | 0.0018 | mg/Kg | 1 | 27-May-2020 17:20 |
| Xylenes, Total | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 17:20 |
| *Surr: 1,2-Dichloroethane-d4* | *93.5* | | *70-126* | *%REC* | *1* | *27-May-2020 17:20* |
| *Surr: 4-Bromofluorobenzene* | *98.6* | | *70-130* | *%REC* | *1* | *27-May-2020 17:20* |
| *Surr: Dibromofluoromethane* | *93.5* | | *70-130* | *%REC* | *1* | *27-May-2020 17:20* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 17:20* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 43 | | 43 | mg/Kg | 1 | 27-May-2020 10:45 |
| >nC12 to nC28 | < 43 | | 43 | mg/Kg | 1 | 27-May-2020 10:45 |
| >nC28 to nC35 | < 43 | | 43 | mg/Kg | 1 | 27-May-2020 10:45 |
| Total Petroleum Hydrocarbon | < 43 | | 43 | mg/Kg | 1 | 27-May-2020 10:45 |
| *Surr: 2-Fluorobiphenyl* | *73.1* | | *70-130* | *%REC* | *1* | *27-May-2020 10:45* |
| *Surr: Trifluoromethyl benzene* | *85.6* | | *70-130* | *%REC* | *1* | *27-May-2020 10:45* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **20.0** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-6 (4-8)
Collection Date: 20-May-2020 11:08

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-12
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,1,2,2-Tetrachloroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,1,2-Trichloroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,1-Dichloroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,1-Dichloroethene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2,4-Trichlorobenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2-Dibromo-3-chloropropane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2-Dibromoethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2-Dichlorobenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2-Dichloroethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,2-Dichloropropane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,3-Dichlorobenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 1,4-Dichlorobenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| 2-Butanone | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| 2-Hexanone | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| 4-Methyl-2-pentanone | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| **Acetone** | **0.029** | | **0.016** | **mg/Kg** | 1 | 27-May-2020 17:45 |
| Benzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Bromodichloromethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Bromoform | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Bromomethane | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| Carbon disulfide | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| Carbon tetrachloride | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Chlorobenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Chloroethane | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| Chloroform | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Chloromethane | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| cis-1,2-Dichloroethene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| cis-1,3-Dichloropropene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Cyclohexane | < 0.0040 | n | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Dibromochloromethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Dichlorodifluoromethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Ethylbenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Isopropylbenzene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| m,p-Xylene | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| Methyl acetate | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Methyl tert-butyl ether | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Methylcyclohexane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-6 (4-8)
Collection Date: 20-May-2020 11:08

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-12
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0081 | | 0.0081 | mg/Kg | 1 | 27-May-2020 17:45 |
| o-Xylene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Styrene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Tetrachloroethene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Toluene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| trans-1,2-Dichloroethene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| trans-1,3-Dichloropropene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Trichloroethene | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Trichlorofluoromethane | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| Vinyl chloride | < 0.0016 | | 0.0016 | mg/Kg | 1 | 27-May-2020 17:45 |
| Xylenes, Total | < 0.0040 | | 0.0040 | mg/Kg | 1 | 27-May-2020 17:45 |
| *Surr: 1,2-Dichloroethane-d4* | *94.6* | | *70-126* | *%REC* | *1* | *27-May-2020 17:45* |
| *Surr: 4-Bromofluorobenzene* | *97.9* | | *70-130* | *%REC* | *1* | *27-May-2020 17:45* |
| *Surr: Dibromofluoromethane* | *93.1* | | *70-130* | *%REC* | *1* | *27-May-2020 17:45* |
| *Surr: Toluene-d8* | *104* | | *70-130* | *%REC* | *1* | *27-May-2020 17:45* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 44 | | 44 | mg/Kg | 1 | 27-May-2020 11:14 |
| >nC12 to nC28 | < 44 | | 44 | mg/Kg | 1 | 27-May-2020 11:14 |
| >nC28 to nC35 | < 44 | | 44 | mg/Kg | 1 | 27-May-2020 11:14 |
| Total Petroleum Hydrocarbon | < 44 | | 44 | mg/Kg | 1 | 27-May-2020 11:14 |
| *Surr: 2-Fluorobiphenyl* | *73.0* | | *70-130* | *%REC* | *1* | *27-May-2020 11:14* |
| *Surr: Trifluoromethyl benzene* | *85.9* | | *70-130* | *%REC* | *1* | *27-May-2020 11:14* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **19.6** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-1 (8-12)
Collection Date: 20-May-2020 09:34

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-13
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: AKP |
| **Benzene** | **0.59** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| **Ethylbenzene** | **0.11** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| **m,p-Xylene** | **0.15** | | **0.010** | **mg/L** | 5 | 23-May-2020 22:39 |
| **Methyl tert-butyl ether** | **0.25** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| **o-Xylene** | **0.0066** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| **Toluene** | **0.023** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| **Xylenes, Total** | **0.15** | | **0.0050** | **mg/L** | 5 | 23-May-2020 22:39 |
| *Surr: 1,2-Dichloroethane-d4* | *85.1* | | *70-126* | *%REC* | *5* | *23-May-2020 22:39* |
| *Surr: 4-Bromofluorobenzene* | *99.4* | | *81-113* | *%REC* | *5* | *23-May-2020 22:39* |
| *Surr: Dibromofluoromethane* | *90.6* | | *77-123* | *%REC* | *5* | *23-May-2020 22:39* |
| *Surr: Toluene-d8* | *95.9* | | *82-127* | *%REC* | *5* | *23-May-2020 22:39* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| **nC6 to nC12** | **2.7** | | **0.49** | **mg/L** | 1 | 23-May-2020 03:35 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 03:35 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 03:35 |
| **Total Petroleum Hydrocarbon** | **2.70** | | **0.49** | **mg/L** | 1 | 23-May-2020 03:35 |
| *Surr: 2-Fluorobiphenyl* | *90.7* | | *70-130* | *%REC* | *1* | *23-May-2020 03:35* |
| *Surr: Trifluoromethyl benzene* | *97.2* | | *70-130* | *%REC* | *1* | *23-May-2020 03:35* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-5 (8-12)
Collection Date: 20-May-2020 10:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-14
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| 1,1,1-Trichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,1,2,2-Tetrachloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,1,2-Trichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,1-Dichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,1-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2,4-Trichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2-Dibromo-3-chloropropane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2-Dibromoethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2-Dichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,2-Dichloropropane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,3-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 1,4-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| 2-Butanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| 2-Hexanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| 4-Methyl-2-pentanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| Acetone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Bromodichloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Bromoform | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Bromomethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Carbon disulfide | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| Carbon tetrachloride | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Chlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Chloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Chloroform | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Chloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| cis-1,2-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| cis-1,3-Dichloropropene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Cyclohexane | < 0.0010 | n | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Dibromochloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Dichlorodifluoromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Isopropylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| Methyl acetate | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Methylcyclohexane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-5 (8-12)
Collection Date: 20-May-2020 10:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-14
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: AKP |
| Methylene chloride | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 11:51 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Styrene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Tetrachloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| trans-1,2-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| trans-1,3-Dichloropropene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Trichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Trichlorofluoromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Vinyl chloride | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 11:51 |
| *Surr: 1,2-Dichloroethane-d4* | *88.7* | | *70-126* | *%REC* | *1* | *26-May-2020 11:51* |
| *Surr: 4-Bromofluorobenzene* | *96.0* | | *81-113* | *%REC* | *1* | *26-May-2020 11:51* |
| *Surr: Dibromofluoromethane* | *96.1* | | *77-123* | *%REC* | *1* | *26-May-2020 11:51* |
| *Surr: Toluene-d8* | *97.0* | | *82-127* | *%REC* | *1* | *26-May-2020 11:51* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:04 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:04 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:04 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:04 |
| *Surr: 2-Fluorobiphenyl* | *85.0* | | *70-130* | *%REC* | *1* | *23-May-2020 04:04* |
| *Surr: Trifluoromethyl benzene* | *99.7* | | *70-130* | *%REC* | *1* | *23-May-2020 04:04* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-8 (8-12)
Collection Date: 20-May-2020 11:58

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-15
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 23-May-2020 20:58 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:58 |
| *Surr: 1,2-Dichloroethane-d4* | *88.1* | | *70-126* | *%REC* | *1* | *23-May-2020 20:58* |
| *Surr: 4-Bromofluorobenzene* | *95.3* | | *81-113* | *%REC* | *1* | *23-May-2020 20:58* |
| *Surr: Dibromofluoromethane* | *90.7* | | *77-123* | *%REC* | *1* | *23-May-2020 20:58* |
| *Surr: Toluene-d8* | *97.3* | | *82-127* | *%REC* | *1* | *23-May-2020 20:58* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | **Method:TX1005** | | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:33 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:33 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:33 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 04:33 |
| *Surr: 2-Fluorobiphenyl* | *85.4* | | *70-130* | *%REC* | *1* | *23-May-2020 04:33* |
| *Surr: Trifluoromethyl benzene* | *98.2* | | *70-130* | *%REC* | *1* | *23-May-2020 04:33* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-13 (0-4)
Collection Date: 21-May-2020 09:00

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-16
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| Ethylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| m,p-Xylene | < 0.0088 | | 0.0088 | mg/Kg | 1 | 27-May-2020 10:39 |
| Methyl tert-butyl ether | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| o-Xylene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| Toluene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| Xylenes, Total | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 10:39 |
| *Surr: 1,2-Dichloroethane-d4* | *93.7* | | *70-126* | *%REC* | *1* | *27-May-2020 10:39* |
| *Surr: 4-Bromofluorobenzene* | *98.0* | | *70-130* | *%REC* | *1* | *27-May-2020 10:39* |
| *Surr: Dibromofluoromethane* | *91.9* | | *70-130* | *%REC* | *1* | *27-May-2020 10:39* |
| *Surr: Toluene-d8* | *104* | | *70-130* | *%REC* | *1* | *27-May-2020 10:39* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 11:43 |
| >nC12 to nC28 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 11:43 |
| >nC28 to nC35 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 11:43 |
| Total Petroleum Hydrocarbon | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 11:43 |
| *Surr: 2-Fluorobiphenyl* | *79.4* | | *70-130* | *%REC* | *1* | *27-May-2020 11:43* |
| *Surr: Trifluoromethyl benzene* | *92.2* | | *70-130* | *%REC* | *1* | *27-May-2020 11:43* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **18.3** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-15 (8-12)
Collection Date: 21-May-2020 09:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-17
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| Ethylbenzene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| m,p-Xylene | < 0.0082 | | 0.0082 | mg/Kg | 1 | 27-May-2020 11:04 |
| Methyl tert-butyl ether | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| o-Xylene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| Toluene | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| Xylenes, Total | < 0.0041 | | 0.0041 | mg/Kg | 1 | 27-May-2020 11:04 |
| *Surr: 1,2-Dichloroethane-d4* | *92.3* | | *70-126* | *%REC* | *1* | *27-May-2020 11:04* |
| *Surr: 4-Bromofluorobenzene* | *98.6* | | *70-130* | *%REC* | *1* | *27-May-2020 11:04* |
| *Surr: Dibromofluoromethane* | *91.4* | | *70-130* | *%REC* | *1* | *27-May-2020 11:04* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 11:04* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 12:12 |
| >nC12 to nC28 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 12:12 |
| >nC28 to nC35 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 12:12 |
| Total Petroleum Hydrocarbon | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 12:12 |
| *Surr: 2-Fluorobiphenyl* | *75.0* | | *70-130* | *%REC* | *1* | *27-May-2020 12:12* |
| *Surr: Trifluoromethyl benzene* | *87.0* | | *70-130* | *%REC* | *1* | *27-May-2020 12:12* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **18.6** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-15 (8-12) Water
Collection Date: 21-May-2020 09:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-18
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 23-May-2020 21:24 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 21:24 |
| *Surr: 1,2-Dichloroethane-d4* | *86.5* | | *70-126* | *%REC* | *1* | *23-May-2020 21:24* |
| *Surr: 4-Bromofluorobenzene* | *97.4* | | *81-113* | *%REC* | *1* | *23-May-2020 21:24* |
| *Surr: Dibromofluoromethane* | *90.3* | | *77-123* | *%REC* | *1* | *23-May-2020 21:24* |
| *Surr: Toluene-d8* | *99.1* | | *82-127* | *%REC* | *1* | *23-May-2020 21:24* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | **Method:TX1005** | | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:02 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:02 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:02 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:02 |
| *Surr: 2-Fluorobiphenyl* | *82.6* | | *70-130* | *%REC* | *1* | *23-May-2020 05:02* |
| *Surr: Trifluoromethyl benzene* | *94.0* | | *70-130* | *%REC* | *1* | *23-May-2020 05:02* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-16 (4-8)
Collection Date: 21-May-2020 09:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-19
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| Ethylbenzene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| m,p-Xylene | < 0.0075 | | 0.0075 | mg/Kg | 1 | 28-May-2020 04:07 |
| Methyl tert-butyl ether | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| o-Xylene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| Toluene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| Xylenes, Total | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:07 |
| *Surr: 1,2-Dichloroethane-d4* | *99.0* | | *70-126* | *%REC* | *1* | *28-May-2020 04:07* |
| *Surr: 4-Bromofluorobenzene* | *97.9* | | *70-130* | *%REC* | *1* | *28-May-2020 04:07* |
| *Surr: Dibromofluoromethane* | *94.5* | | *70-130* | *%REC* | *1* | *28-May-2020 04:07* |
| *Surr: Toluene-d8* | *104* | | *70-130* | *%REC* | *1* | *28-May-2020 04:07* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 40 | | 40 | mg/Kg | 1 | 27-May-2020 12:41 |
| >nC12 to nC28 | < 40 | | 40 | mg/Kg | 1 | 27-May-2020 12:41 |
| >nC28 to nC35 | < 40 | | 40 | mg/Kg | 1 | 27-May-2020 12:41 |
| Total Petroleum Hydrocarbon | < 40 | | 40 | mg/Kg | 1 | 27-May-2020 12:41 |
| *Surr: 2-Fluorobiphenyl* | *71.4* | | *70-130* | *%REC* | *1* | *27-May-2020 12:41* |
| *Surr: Trifluoromethyl benzene* | *78.9* | | *70-130* | *%REC* | *1* | *27-May-2020 12:41* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **18.6** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-17 (4-8)
Collection Date: 21-May-2020 10:07

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-20
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| Ethylbenzene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| m,p-Xylene | < 0.0075 | | 0.0075 | mg/Kg | 1 | 28-May-2020 04:32 |
| Methyl tert-butyl ether | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| o-Xylene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| Toluene | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| Xylenes, Total | < 0.0038 | | 0.0038 | mg/Kg | 1 | 28-May-2020 04:32 |
| *Surr: 1,2-Dichloroethane-d4* | *94.9* | | *70-126* | *%REC* | *1* | *28-May-2020 04:32* |
| *Surr: 4-Bromofluorobenzene* | *97.3* | | *70-130* | *%REC* | *1* | *28-May-2020 04:32* |
| *Surr: Dibromofluoromethane* | *92.3* | | *70-130* | *%REC* | *1* | *28-May-2020 04:32* |
| *Surr: Toluene-d8* | *106* | | *70-130* | *%REC* | *1* | *28-May-2020 04:32* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 13:10 |
| >nC12 to nC28 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 13:10 |
| >nC28 to nC35 | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 13:10 |
| Total Petroleum Hydrocarbon | < 39 | | 39 | mg/Kg | 1 | 27-May-2020 13:10 |
| *Surr: 2-Fluorobiphenyl* | *73.8* | | *70-130* | *%REC* | *1* | *27-May-2020 13:10* |
| *Surr: Trifluoromethyl benzene* | *87.3* | | *70-130* | *%REC* | *1* | *27-May-2020 13:10* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **19.0** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-18 (4-8)
Collection Date: 21-May-2020 10:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-21
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,1,2,2-Tetrachloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,1,2-Trichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,1-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,1-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2,4-Trichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2-Dibromo-3-chloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2-Dibromoethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2-Dichloroethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,2-Dichloropropane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,3-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 1,4-Dichlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| 2-Butanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| 2-Hexanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| 4-Methyl-2-pentanone | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| Acetone | < 0.018 | | 0.018 | mg/Kg | 1 | 27-May-2020 18:10 |
| Benzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Bromodichloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Bromoform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Bromomethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| Carbon disulfide | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| Carbon tetrachloride | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Chlorobenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Chloroethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| Chloroform | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Chloromethane | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| cis-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| cis-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Cyclohexane | < 0.0044 | n | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Dibromochloromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Dichlorodifluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Ethylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Isopropylbenzene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| m,p-Xylene | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| Methyl acetate | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Methyl tert-butyl ether | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Methylcyclohexane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-18 (4-8)
Collection Date: 21-May-2020 10:26

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-21
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0089 | | 0.0089 | mg/Kg | 1 | 27-May-2020 18:10 |
| o-Xylene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Styrene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Tetrachloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Toluene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| trans-1,2-Dichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| trans-1,3-Dichloropropene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Trichloroethene | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Trichlorofluoromethane | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| Vinyl chloride | < 0.0018 | | 0.0018 | mg/Kg | 1 | 27-May-2020 18:10 |
| Xylenes, Total | < 0.0044 | | 0.0044 | mg/Kg | 1 | 27-May-2020 18:10 |
| *Surr: 1,2-Dichloroethane-d4* | *92.4* | | *70-126* | *%REC* | *1* | *27-May-2020 18:10* |
| *Surr: 4-Bromofluorobenzene* | *97.0* | | *70-130* | *%REC* | *1* | *27-May-2020 18:10* |
| *Surr: Dibromofluoromethane* | *93.0* | | *70-130* | *%REC* | *1* | *27-May-2020 18:10* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 18:10* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 13:39 |
| >nC12 to nC28 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 13:39 |
| >nC28 to nC35 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 13:39 |
| Total Petroleum Hydrocarbon | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 13:39 |
| *Surr: 2-Fluorobiphenyl* | *75.6* | | *70-130* | *%REC* | *1* | *27-May-2020 13:39* |
| *Surr: Trifluoromethyl benzene* | *88.0* | | *70-130* | *%REC* | *1* | *27-May-2020 13:39* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **19.2** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-18 (8-12) Water
Collection Date: 21-May-2020 11:32

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-22
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| 1,1,1-Trichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,1,2,2-Tetrachloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,1,2-Trichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,1-Dichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,1-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2,4-Trichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2-Dibromo-3-chloropropane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2-Dibromoethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2-Dichloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,2-Dichloropropane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,3-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 1,4-Dichlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| 2-Butanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| 2-Hexanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| 4-Methyl-2-pentanone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| Acetone | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Bromodichloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Bromoform | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Bromomethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Carbon disulfide | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| Carbon tetrachloride | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Chlorobenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Chloroethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Chloroform | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Chloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| cis-1,2-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| cis-1,3-Dichloropropene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Cyclohexane | < 0.0010 | n | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Dibromochloromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Dichlorodifluoromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Isopropylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| Methyl acetate | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Methylcyclohexane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-18 (8-12) Water
Collection Date: 21-May-2020 11:32

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-22
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| Methylene chloride | < 0.0020 | | 0.0020 | mg/L | 1 | 26-May-2020 12:14 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Styrene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Tetrachloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| trans-1,2-Dichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| trans-1,3-Dichloropropene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Trichloroethene | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Trichlorofluoromethane | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Vinyl chloride | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 26-May-2020 12:14 |
| *Surr: 1,2-Dichloroethane-d4* | *83.7* | | *70-126* | *%REC* | *1* | *26-May-2020 12:14* |
| *Surr: 4-Bromofluorobenzene* | *96.7* | | *81-113* | *%REC* | *1* | *26-May-2020 12:14* |
| *Surr: Dibromofluoromethane* | *93.9* | | *77-123* | *%REC* | *1* | *26-May-2020 12:14* |
| *Surr: Toluene-d8* | *97.3* | | *82-127* | *%REC* | *1* | *26-May-2020 12:14* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | **Method:TX1005** | | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:31 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:31 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:31 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 05:31 |
| *Surr: 2-Fluorobiphenyl* | *84.1* | | *70-130* | *%REC* | *1* | *23-May-2020 05:31* |
| *Surr: Trifluoromethyl benzene* | *95.0* | | *70-130* | *%REC* | *1* | *23-May-2020 05:31* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-19 (0-4)
Collection Date: 21-May-2020 10:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-23
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,1,2,2-Tetrachloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,1,2-Trichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,1-Dichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,1-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2,4-Trichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2-Dibromo-3-chloropropane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2-Dibromoethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2-Dichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,2-Dichloropropane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,3-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 1,4-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| 2-Butanone | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| 2-Hexanone | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| 4-Methyl-2-pentanone | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| Acetone | < 0.019 | | 0.019 | mg/Kg | 1 | 27-May-2020 18:35 |
| Benzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Bromodichloromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Bromoform | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Bromomethane | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| Carbon disulfide | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| Carbon tetrachloride | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Chlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Chloroethane | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| Chloroform | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Chloromethane | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| cis-1,2-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| cis-1,3-Dichloropropene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Cyclohexane | < 0.0048 | n | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Dibromochloromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Dichlorodifluoromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Ethylbenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Isopropylbenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| m,p-Xylene | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| Methyl acetate | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Methyl tert-butyl ether | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Methylcyclohexane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-19 (0-4)
Collection Date: 21-May-2020 10:51

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-23
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0097 | | 0.0097 | mg/Kg | 1 | 27-May-2020 18:35 |
| o-Xylene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Styrene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Tetrachloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Toluene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| trans-1,2-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| trans-1,3-Dichloropropene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Trichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Trichlorofluoromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| Vinyl chloride | < 0.0019 | | 0.0019 | mg/Kg | 1 | 27-May-2020 18:35 |
| Xylenes, Total | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 18:35 |
| *Surr: 1,2-Dichloroethane-d4* | *93.8* | | *70-126* | *%REC* | *1* | *27-May-2020 18:35* |
| *Surr: 4-Bromofluorobenzene* | *99.8* | | *70-130* | *%REC* | *1* | *27-May-2020 18:35* |
| *Surr: Dibromofluoromethane* | *89.9* | | *70-130* | *%REC* | *1* | *27-May-2020 18:35* |
| *Surr: Toluene-d8* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 18:35* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 09:46 |
| >nC12 to nC28 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 09:46 |
| >nC28 to nC35 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 09:46 |
| Total Petroleum Hydrocarbon | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 09:46 |
| *Surr: 2-Fluorobiphenyl* | *97.7* | | *70-130* | *%REC* | *1* | *27-May-2020 09:46* |
| *Surr: Trifluoromethyl benzene* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 09:46* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **20.9** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-20 (0-4)
Collection Date: 21-May-2020 11:06

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-24
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: WLR |
| 1,1,1-Trichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,1,2,2-Tetrachloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,1,2-Trichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,1-Dichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,1-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2,4-Trichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2-Dibromo-3-chloropropane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2-Dibromoethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2-Dichloroethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,2-Dichloropropane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,3-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 1,4-Dichlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| 2-Butanone | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| 2-Hexanone | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| 4-Methyl-2-pentanone | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| Acetone | < 0.019 | | 0.019 | mg/Kg | 1 | 27-May-2020 19:00 |
| Benzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Bromodichloromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Bromoform | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Bromomethane | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| Carbon disulfide | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| Carbon tetrachloride | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Chlorobenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Chloroethane | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| Chloroform | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Chloromethane | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| cis-1,2-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| cis-1,3-Dichloropropene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Cyclohexane | < 0.0048 | n | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Dibromochloromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Dichlorodifluoromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Ethylbenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Isopropylbenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| m,p-Xylene | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| Methyl acetate | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Methyl tert-butyl ether | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Methylcyclohexane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-20 (0-4)
Collection Date: 21-May-2020 11:06

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-24
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Methylene chloride | < 0.0096 | | 0.0096 | mg/Kg | 1 | 27-May-2020 19:00 |
| o-Xylene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Styrene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Tetrachloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Toluene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| trans-1,2-Dichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| trans-1,3-Dichloropropene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Trichloroethene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Trichlorofluoromethane | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| Vinyl chloride | < 0.0019 | | 0.0019 | mg/Kg | 1 | 27-May-2020 19:00 |
| Xylenes, Total | < 0.0048 | | 0.0048 | mg/Kg | 1 | 27-May-2020 19:00 |
| *Surr: 1,2-Dichloroethane-d4* | *93.1* | | *70-126* | *%REC* | *1* | *27-May-2020 19:00* |
| *Surr: 4-Bromofluorobenzene* | *98.6* | | *70-130* | *%REC* | *1* | *27-May-2020 19:00* |
| *Surr: Dibromofluoromethane* | *92.0* | | *70-130* | *%REC* | *1* | *27-May-2020 19:00* |
| *Surr: Toluene-d8* | *104* | | *70-130* | *%REC* | *1* | *27-May-2020 19:00* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 48 | | 48 | mg/Kg | 1 | 27-May-2020 10:15 |
| >nC12 to nC28 | < 48 | | 48 | mg/Kg | 1 | 27-May-2020 10:15 |
| >nC28 to nC35 | < 48 | | 48 | mg/Kg | 1 | 27-May-2020 10:15 |
| Total Petroleum Hydrocarbon | < 48 | | 48 | mg/Kg | 1 | 27-May-2020 10:15 |
| *Surr: 2-Fluorobiphenyl* | *93.7* | | *70-130* | *%REC* | *1* | *27-May-2020 10:15* |
| *Surr: Trifluoromethyl benzene* | *118* | | *70-130* | *%REC* | *1* | *27-May-2020 10:15* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **21.0** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-23 (8-12)
Collection Date: 21-May-2020 11:29

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-25
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| Ethylbenzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| m,p-Xylene | < 0.0096 | | 0.0096 | mg/Kg | 1 | 28-May-2020 05:22 |
| Methyl tert-butyl ether | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| o-Xylene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| Toluene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| Xylenes, Total | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 05:22 |
| *Surr: 1,2-Dichloroethane-d4* | *96.8* | | *70-126* | *%REC* | *1* | *28-May-2020 05:22* |
| *Surr: 4-Bromofluorobenzene* | *101* | | *70-130* | *%REC* | *1* | *28-May-2020 05:22* |
| *Surr: Dibromofluoromethane* | *94.9* | | *70-130* | *%REC* | *1* | *28-May-2020 05:22* |
| *Surr: Toluene-d8* | *107* | | *70-130* | *%REC* | *1* | *28-May-2020 05:22* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 10:45 |
| >nC12 to nC28 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 10:45 |
| >nC28 to nC35 | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 10:45 |
| Total Petroleum Hydrocarbon | < 46 | | 46 | mg/Kg | 1 | 27-May-2020 10:45 |
| *Surr: 2-Fluorobiphenyl* | *98.8* | | *70-130* | *%REC* | *1* | *27-May-2020 10:45* |
| *Surr: Trifluoromethyl benzene* | *112* | | *70-130* | *%REC* | *1* | *27-May-2020 10:45* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: JAC |
| **Percent Moisture** | **17.8** | | **0.0100** | **wt%** | 1 | 23-May-2020 15:23 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-22 (4-8)
Collection Date: 21-May-2020 11:50

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-26
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| Ethylbenzene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| m,p-Xylene | < 0.0084 | | 0.0084 | mg/Kg | 1 | 28-May-2020 05:47 |
| Methyl tert-butyl ether | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| o-Xylene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| Toluene | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| Xylenes, Total | < 0.0042 | | 0.0042 | mg/Kg | 1 | 28-May-2020 05:47 |
| *Surr: 1,2-Dichloroethane-d4* | *96.9* | | *70-126* | *%REC* | *1* | *28-May-2020 05:47* |
| *Surr: 4-Bromofluorobenzene* | *101* | | *70-130* | *%REC* | *1* | *28-May-2020 05:47* |
| *Surr: Dibromofluoromethane* | *94.5* | | *70-130* | *%REC* | *1* | *28-May-2020 05:47* |
| *Surr: Toluene-d8* | *108* | | *70-130* | *%REC* | *1* | *28-May-2020 05:47* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 11:14 |
| >nC12 to nC28 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 11:14 |
| >nC28 to nC35 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 11:14 |
| Total Petroleum Hydrocarbon | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 11:14 |
| *Surr: 2-Fluorobiphenyl* | *98.5* | | *70-130* | *%REC* | *1* | *27-May-2020 11:14* |
| *Surr: Trifluoromethyl benzene* | *119* | | *70-130* | *%REC* | *1* | *27-May-2020 11:14* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: MZD |
| **Percent Moisture** | **23.0** | | **0.0100** | **wt%** | 1 | 26-May-2020 11:29 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-22 (8-12) Water
Collection Date: 21-May-2020 11:54

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-27
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | **Method:SW8260** | | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 23-May-2020 22:14 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 22:14 |
| *Surr: 1,2-Dichloroethane-d4* | *88.4* | | *70-126* | *%REC* | *1* | *23-May-2020 22:14* |
| *Surr: 4-Bromofluorobenzene* | *96.4* | | *81-113* | *%REC* | *1* | *23-May-2020 22:14* |
| *Surr: Dibromofluoromethane* | *91.7* | | *77-123* | *%REC* | *1* | *23-May-2020 22:14* |
| *Surr: Toluene-d8* | *96.3* | | *82-127* | *%REC* | *1* | *23-May-2020 22:14* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | **Method:TX1005** | | | Prep:TX1005PR / 22-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 06:01 |
| >nC12 to nC28 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 06:01 |
| >nC28 to nC35 | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 06:01 |
| Total Petroleum Hydrocarbon | < 0.49 | | 0.49 | mg/L | 1 | 23-May-2020 06:01 |
| *Surr: 2-Fluorobiphenyl* | *76.1* | | *70-130* | *%REC* | *1* | *23-May-2020 06:01* |
| *Surr: Trifluoromethyl benzene* | *90.1* | | *70-130* | *%REC* | *1* | *23-May-2020 06:01* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: Composite I
Collection Date: 21-May-2020 12:00

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-28
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **TCLP VOLATILES** | | **Method:SW8260** | Leache:SW1311 / 27-May-2020 | Prep:SW1311 / 27-May-2020 | | Analyst: PC |
| 1,1-Dichloroethene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| 1,2-Dichloroethane | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| 1,4-Dichlorobenzene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| 2-Butanone | < 200 | | 200 | ug/L | 20 | 28-May-2020 08:53 |
| Benzene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Carbon tetrachloride | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Chlorobenzene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Chloroform | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Tetrachloroethene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Trichloroethene | < 100 | | 100 | ug/L | 20 | 28-May-2020 08:53 |
| Vinyl chloride | < 40 | | 40 | ug/L | 20 | 28-May-2020 08:53 |
| *Surr: 1,2-Dichloroethane-d4* | *99.5* | | *70-126* | *%REC* | *20* | *28-May-2020 08:53* |
| *Surr: 4-Bromofluorobenzene* | *93.3* | | *82-124* | *%REC* | *20* | *28-May-2020 08:53* |
| *Surr: Dibromofluoromethane* | *99.2* | | *77-123* | *%REC* | *20* | *28-May-2020 08:53* |
| *Surr: Toluene-d8* | *95.9* | | *82-127* | *%REC* | *20* | *28-May-2020 08:53* |
| **FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B** | | **Method:ASTM D92-12b** | | | | Analyst: TH |
| Flash Point | > 212 | n | 50.0 | °F | 1 | 22-May-2020 09:30 |
| **REACTIVE CYANIDE** | | **Method:SW7.3.3.2** | | Prep:SW7.3.3.2 | | Analyst: KVL |
| Reactive Cyanide | < 100 | n | 100 | mg/Kg | 1 | 22-May-2020 14:30 |
| **REACTIVE SULFIDE** | | **Method:SW7.3.4.2** | | | | Analyst: KVL |
| Reactive Sulfide | < 100 | n | 100 | mg/Kg | 1 | 22-May-2020 13:00 |
| **PH SOIL BY SW9045D** | | **Method:SW9045D** | | | | Analyst: MZD |
| **pH** | **7.74** | H | **0.100** | **pH Units** | 1 | 26-May-2020 15:35 |
| **Temp Deg C @pH** | **21.1** | H | **0** | **°C** | 1 | 26-May-2020 15:35 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: Composite II
Collection Date: 21-May-2020 12:00

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-29
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **TCLP SEMIVOLATILES** | **Method:SW1311/8270** | | Leache:SW1311 / 27-May-2020 | Prep:SW3510 / 27-May-2020 | | Analyst: GEY |
| 2,4,5-Trichlorophenol | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| 2,4,6-Trichlorophenol | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| 2,4-Dinitrotoluene | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Cresols, Total | < 15 | | 15 | ug/L | 1 | 29-May-2020 16:08 |
| Hexachlorobenzene | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Hexachlorobutadiene | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Hexachloroethane | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Nitrobenzene | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Pentachlorophenol | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| Pyridine | < 5.0 | | 5.0 | ug/L | 1 | 29-May-2020 16:08 |
| *Surr: 2,4,6-Tribromophenol* | *60.0* | | *39-153* | *%REC* | *1* | *29-May-2020 16:08* |
| *Surr: 2-Fluorobiphenyl* | *64.5* | | *40-147* | *%REC* | *1* | *29-May-2020 16:08* |
| *Surr: 2-Fluorophenol* | *49.3* | | *21-110* | *%REC* | *1* | *29-May-2020 16:08* |
| *Surr: 4-Terphenyl-d14* | *58.9* | | *39-141* | *%REC* | *1* | *29-May-2020 16:08* |
| *Surr: Nitrobenzene-d5* | *45.7* | | *37-140* | *%REC* | *1* | *29-May-2020 16:08* |
| *Surr: Phenol-d6* | *42.9* | | *11-110* | *%REC* | *1* | *29-May-2020 16:08* |
| **TCLP METALS BY SW6020A** | **Method:SW1311/6020** | | Leache:SW1311 / 27-May-2020 | Prep:SW3010A / 27-May-2020 | | Analyst: JHD |
| Antimony | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Arsenic | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| **Barium** | **0.334** | | **0.200** | **mg/L** | 1 | 27-May-2020 23:05 |
| Beryllium | < 0.0200 | | 0.0200 | mg/L | 1 | 27-May-2020 23:05 |
| Cadmium | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Chromium | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Lead | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Nickel | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Selenium | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| Silver | < 0.0500 | | 0.0500 | mg/L | 1 | 27-May-2020 23:05 |
| **TCLP MERCURY BY SW7470A** | **Method:SW7470** | | Leache:SW1311 / 27-May-2020 | Prep:SW7470 / 28-May-2020 | | Analyst: FO |
| Mercury | < 0.000200 | | 0.000200 | mg/L | 1 | 28-May-2020 14:00 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: Composite III
Collection Date: 21-May-2020 12:00

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-30
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 06:12 |
| **Ethylbenzene** | **0.027** | | **0.0048** | **mg/Kg** | 1 | 28-May-2020 06:12 |
| **m,p-Xylene** | **0.051** | | **0.0096** | **mg/Kg** | 1 | 28-May-2020 06:12 |
| Methyl tert-butyl ether | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 06:12 |
| o-Xylene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 06:12 |
| Toluene | < 0.0048 | | 0.0048 | mg/Kg | 1 | 28-May-2020 06:12 |
| **Xylenes, Total** | **0.052** | | **0.0048** | **mg/Kg** | 1 | 28-May-2020 06:12 |
| *Surr: 1,2-Dichloroethane-d4* | *98.9* | | *70-126* | *%REC* | *1* | *28-May-2020 06:12* |
| *Surr: 4-Bromofluorobenzene* | *102* | | *70-130* | *%REC* | *1* | *28-May-2020 06:12* |
| *Surr: Dibromofluoromethane* | *94.7* | | *70-130* | *%REC* | *1* | *28-May-2020 06:12* |
| *Surr: Toluene-d8* | *106* | | *70-130* | *%REC* | *1* | *28-May-2020 06:12* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 50 | | 50 | mg/Kg | 1 | 27-May-2020 11:43 |
| >nC12 to nC28 | < 50 | | 50 | mg/Kg | 1 | 27-May-2020 11:43 |
| >nC28 to nC35 | < 50 | | 50 | mg/Kg | 1 | 27-May-2020 11:43 |
| Total Petroleum Hydrocarbon | < 50 | | 50 | mg/Kg | 1 | 27-May-2020 11:43 |
| *Surr: 2-Fluorobiphenyl* | *97.9* | | *70-130* | *%REC* | *1* | *27-May-2020 11:43* |
| *Surr: Trifluoromethyl benzene* | *103* | | *70-130* | *%REC* | *1* | *27-May-2020 11:43* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-12
Collection Date: 20-May-2020 13:34

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-31
Matrix:Soil

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: WLR |
| Benzene | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| Ethylbenzene | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| m,p-Xylene | < 0.0094 | | 0.0094 | mg/Kg | 1 | 28-May-2020 06:36 |
| Methyl tert-butyl ether | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| o-Xylene | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| Toluene | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| Xylenes, Total | < 0.0047 | | 0.0047 | mg/Kg | 1 | 28-May-2020 06:36 |
| *Surr: 1,2-Dichloroethane-d4* | *94.9* | | *70-126* | *%REC* | *1* | *28-May-2020 06:36* |
| *Surr: 4-Bromofluorobenzene* | *98.9* | | *70-130* | *%REC* | *1* | *28-May-2020 06:36* |
| *Surr: Dibromofluoromethane* | *94.9* | | *70-130* | *%REC* | *1* | *28-May-2020 06:36* |
| *Surr: Toluene-d8* | *106* | | *70-130* | *%REC* | *1* | *28-May-2020 06:36* |
| **TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 12:12 |
| >nC12 to nC28 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 12:12 |
| >nC28 to nC35 | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 12:12 |
| Total Petroleum Hydrocarbon | < 45 | | 45 | mg/Kg | 1 | 27-May-2020 12:12 |
| *Surr: 2-Fluorobiphenyl* | *96.7* | | *70-130* | *%REC* | *1* | *27-May-2020 12:12* |
| *Surr: Trifluoromethyl benzene* | *109* | | *70-130* | *%REC* | *1* | *27-May-2020 12:12* |
| **MOISTURE** | | **Method:SW3550** | | | | Analyst: MZD |
| **Percent Moisture** | **23.3** | | **0.0100** | **wt%** | 1 | 26-May-2020 11:29 |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: HVJ Associates
Project: Phase II ESA project
Sample ID: EB-14 Water
Collection Date: 20-May-2020 12:56

**ANALYTICAL REPORT**
WorkOrder:HS20050835
Lab ID:HS20050835-32
Matrix:Water

| ANALYSES | RESULT | QUAL | REPORT LIMIT | UNITS | DILUTION FACTOR | DATE ANALYZED |
|---|---|---|---|---|---|---|
| **LOW LEVEL VOLATILES BY SW8260C** | | **Method:SW8260** | | | | Analyst: AKP |
| Benzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| Ethylbenzene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| m,p-Xylene | < 0.0020 | | 0.0020 | mg/L | 1 | 23-May-2020 20:07 |
| Methyl tert-butyl ether | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| o-Xylene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| Toluene | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| Xylenes, Total | < 0.0010 | | 0.0010 | mg/L | 1 | 23-May-2020 20:07 |
| *Surr: 1,2-Dichloroethane-d4* | *88.5* | | *70-126* | *%REC* | *1* | *23-May-2020 20:07* |
| *Surr: 4-Bromofluorobenzene* | *96.0* | | *81-113* | *%REC* | *1* | *23-May-2020 20:07* |
| *Surr: Dibromofluoromethane* | *89.4* | | *77-123* | *%REC* | *1* | *23-May-2020 20:07* |
| *Surr: Toluene-d8* | *95.9* | | *82-127* | *%REC* | *1* | *23-May-2020 20:07* |
| **LOW-LEVEL TEXAS TPH BY TX1005** | | **Method:TX1005** | | Prep:TX1005PR / 26-May-2020 | | Analyst: MBG |
| nC6 to nC12 | < 0.48 | | 0.48 | mg/L | 1 | 26-May-2020 16:51 |
| >nC12 to nC28 | < 0.48 | | 0.48 | mg/L | 1 | 26-May-2020 16:51 |
| >nC28 to nC35 | < 0.48 | | 0.48 | mg/L | 1 | 26-May-2020 16:51 |
| Total Petroleum Hydrocarbon | < 0.48 | | 0.48 | mg/L | 1 | 26-May-2020 16:51 |
| *Surr: 2-Fluorobiphenyl* | *99.4* | | *70-130* | *%REC* | *1* | *26-May-2020 16:51* |
| *Surr: Trifluoromethyl benzene* | *114* | | *70-130* | *%REC* | *1* | *26-May-2020 16:51* |

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Weight / Prep Log**

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**Batch ID:** 3756 **Start Date:** 26 May 2020 08:54 **End Date:** 26 May 2020 08:54
**Method:** VOLATILES BY SW8260C

| Sample ID | Container | Sample Wt/Vol | Final Volume | Weight Factor | Container Type |
|---|---|---|---|---|---|
| HS20050835-01 | 1 | 5.67 (g) | 5 (mL) | 0.88 | TerraCore (5035A) |
| HS20050835-02 | 1 | 5.082 (g) | 5 (mL) | 0.98 | TerraCore (5035A) |
| HS20050835-03 | 1 | 5.42 (g) | 5 (mL) | 0.92 | TerraCore (5035A) |
| HS20050835-04 | 1 | 5.386 (g) | 5 (mL) | 0.93 | TerraCore (5035A) |
| HS20050835-05 | 1 | 5.46 (g) | 5 (mL) | 0.92 | TerraCore (5035A) |
| HS20050835-06 | 1 | 5.927 (g) | 5 (mL) | 0.84 | TerraCore (5035A) |
| HS20050835-07 | 1 | 5.567 (g) | 5 (mL) | 0.9 | TerraCore (5035A) |
| HS20050835-08 | 1 | 6.098 (g) | 5 (mL) | 0.82 | TerraCore (5035A) |
| HS20050835-09 | 1 | 6.242 (g) | 5 (mL) | 0.8 | TerraCore (5035A) |
| HS20050835-10 | 1 | 5.901 (g) | 5 (mL) | 0.85 | TerraCore (5035A) |
| HS20050835-11 | 1 | 5.61 (g) | 5 (mL) | 0.89 | TerraCore (5035A) |
| HS20050835-12 | 1 | 6.176 (g) | 5 (mL) | 0.81 | TerraCore (5035A) |
| HS20050835-16 | 1 | 5.667 (g) | 5 (mL) | 0.88 | TerraCore (5035A) |
| HS20050835-17 | 1 | 6.111 (g) | 5 (mL) | 0.82 | TerraCore (5035A) |
| HS20050835-19 | 1 | 6.665 (g) | 5 (mL) | 0.75 | TerraCore (5035A) |
| HS20050835-20 | 1 | 6.68 (g) | 5 (mL) | 0.75 | TerraCore (5035A) |
| HS20050835-21 | 1 | 5.593 (g) | 5 (mL) | 0.89 | TerraCore (5035A) |
| HS20050835-23 | 1 | 5.179 (g) | 5 (mL) | 0.97 | TerraCore (5035A) |
| HS20050835-24 | 1 | 5.206 (g) | 5 (mL) | 0.96 | TerraCore (5035A) |
| HS20050835-25 | 1 | 5.219 (g) | 5 (mL) | 0.96 | TerraCore (5035A) |
| HS20050835-26 | 1 | 5.954 (g) | 5 (mL) | 0.84 | TerraCore (5035A) |
| HS20050835-30 | 1 | 5.216 (g) | 5 (mL) | 0.96 | Bulk (5030B) |
| HS20050835-31 | 1 | 5.295 (g) | 5 (mL) | 0.94 | TerraCore (5035A) |

**Batch ID:** 153754 **Start Date:** 22 May 2020 08:06 **End Date:** 22 May 2020 10:30
**Method:** TX 1005 PREP **Prep Code:** TX 1005_S PR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-01 | | 11.06 (g) | 10 (mL) | 0.9042 |
| HS20050835-02 | | 10.81 (g) | 10 (mL) | 0.9251 |
| HS20050835-03 | | 12.08 (g) | 10 (mL) | 0.8278 |
| HS20050835-04 | | 11.9 (g) | 10 (mL) | 0.8403 |
| HS20050835-05 | | 11.62 (g) | 10 (mL) | 0.8606 |
| HS20050835-06 | | 11.54 (g) | 10 (mL) | 0.8666 |
| HS20050835-07 | | 10.73 (g) | 10 (mL) | 0.932 |
| HS20050835-08 | | 9.69 (g) | 10 (mL) | 1.032 |
| HS20050835-09 | | 12.77 (g) | 10 (mL) | 0.7831 |

**Batch ID:** 153758 **Start Date:** 22 May 2020 09:30 **End Date:** 22 May 2020 11:00
**Method:** TX 1005 PREP **Prep Code:** TX 1005_W PR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-13 | | 30.84 (g) | 3 (mL) | 0.09728 |
| HS20050835-14 | | 30.89 (g) | 3 (mL) | 0.09712 |
| HS20050835-15 | | 30.45 (g) | 3 (mL) | 0.09852 |
| HS20050835-18 | | 30.8 (g) | 3 (mL) | 0.0974 |
| HS20050835-22 | | 30.72 (g) | 3 (mL) | 0.09766 |
| HS20050835-27 | | 30.74 (g) | 3 (mL) | 0.09759 |

**Weight / Prep Log**

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**Batch ID:** 153801 **Start Date:** 26 May 2020 09:53 **End Date:** 26 May 2020 13:00
**Method:** TX 1005 PREP **Prep Code:** TX 1005_W PR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-32 | 1 | 31.06 (g) | 3 (mL) | 0.09659 |

**Batch ID:** 153823 **Start Date:** 26 May 2020 15:21 **End Date:** 26 May 2020 17:00
**Method:** TX 1005 PREP **Prep Code:** TX 1005_S PR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-10 | 1 | 12.91 (g) | 10 (mL) | 0.7746 |
| HS20050835-11 | 1 | 11.6 (g) | 10 (mL) | 0.8621 |
| HS20050835-12 | 1 | 11.45 (g) | 10 (mL) | 0.8734 |
| HS20050835-16 | 1 | 10.96 (g) | 10 (mL) | 0.9124 |
| HS20050835-17 | 1 | 10.83 (g) | 10 (mL) | 0.9234 |
| HS20050835-19 | 1 | 12.58 (g) | 10 (mL) | 0.7949 |
| HS20050835-20 | 1 | 12.87 (g) | 10 (mL) | 0.777 |
| HS20050835-21 | 1 | 11.09 (g) | 10 (mL) | 0.9017 |
| HS20050835-23 | 1 | 11.14 (g) | 10 (mL) | 0.8977 |
| HS20050835-24 | 1 | 10.39 (g) | 10 (mL) | 0.9625 |
| HS20050835-25 | 1 | 10.92 (g) | 10 (mL) | 0.9158 |
| HS20050835-26 | 1 | 10.99 (g) | 10 (mL) | 0.9099 |
| HS20050835-30 | 1 | 10.07 (g) | 10 (mL) | 0.993 |
| HS20050835-31 | 1 | 11.15 (g) | 10 (mL) | 0.8969 |

**Batch ID:** 153827 **Start Date:** 26 May 2020 17:00 **End Date:** 27 May 2020 10:00
**Method:** TCLP MERCURY EXTRACTION BY SW1311 **Prep Code:** 1311LHG EXT

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | | 100 (grams) | 2000 (mL) | 20 |

**Batch ID:** 153829 **Start Date:** 26 May 2020 17:00 **End Date:** 27 May 2020 10:00
**Method:** TCLP METALS EXTRACTION BY SW1311 **Prep Code:** 1311LM EXT

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | | 100 (grams) | 2000 (mL) | 20 |

**Batch ID:** 153831 **Start Date:** 26 May 2020 17:00 **End Date:** 27 May 2020 10:00
**Method:** TCLP SAMPLE EXTRACTION SEMI **Prep Code:** 1311LO_SV

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | | 100 (grams) | 2000 (mL) | 20 |

**Batch ID:** 153832 **Start Date:** 26 May 2020 17:00 **End Date:** 27 May 2020 10:00
**Method:** TCLP ZHE (VOL EXTRACTION) **Prep Code:** 1311ZHE

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-28 | | 25 (g) | 500 (mL) | 20 |

**Weight / Prep Log**

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**Batch ID:** 153850 **Start Date:** 27 May 2020 14:00 **End Date:** 27 May 2020 18:00
**Method:** TCLP LEACHATE DIGESTION BY SW3010A **Prep Code:** 3010A_TCLP

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | | 1 (mL) | 10 (mL) | 10 |

**Batch ID:** 153878 **Start Date:** 27 May 2020 13:00 **End Date:** 27 May 2020 18:00
**Method:** SV AQ SEP FUNNEL EXTRACTION - SW3510C **Prep Code:** 3510_B

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | 1 | 1000 (mL) | 1 (mL) | 0.001 |

**Batch ID:** 153922 **Start Date:** 28 May 2020 10:00 **End Date:** 28 May 2020 12:00
**Method:** MERCURY TCLP PREP BY SW7470A **Prep Code:** 1311_HGPR

| Sample ID | Container | Sample Wt/Vol | Final Volume | Prep Factor |
|---|---|---|---|---|
| HS20050835-29 | | 10 (mL) | 10 (mL) | 1 |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** 153754 ( 0 ) | **Test Name :** TEXAS TPH BY TX1005 | | | | **Matrix:** Soil | |
| HS20050835-01 | EB-7 (8-12) | 20 May 2020 11:26 | | 22 May 2020 08:06 | 22 May 2020 21:44 | 1 |
| HS20050835-02 | EB-8 (0-4) | 20 May 2020 11:45 | | 22 May 2020 08:06 | 22 May 2020 22:14 | 1 |
| HS20050835-03 | EB-9 (0-4) | 20 May 2020 12:18 | | 22 May 2020 08:06 | 22 May 2020 22:43 | 1 |
| HS20050835-04 | EB-10 (4-8) | 20 May 2020 12:35 | | 22 May 2020 08:06 | 22 May 2020 23:12 | 1 |
| HS20050835-05 | EB-11 (8-12) | 20 May 2020 13:51 | | 22 May 2020 08:06 | 23 May 2020 00:39 | 1 |
| HS20050835-06 | EB-14 (4-8) | 20 May 2020 13:00 | | 22 May 2020 08:06 | 23 May 2020 01:09 | 1 |
| HS20050835-07 | EB-1 (0-4) | 20 May 2020 09:16 | | 22 May 2020 08:06 | 23 May 2020 01:38 | 1 |
| HS20050835-08 | EB-2 (0-4) | 20 May 2020 09:45 | | 22 May 2020 08:06 | 23 May 2020 02:07 | 1 |
| HS20050835-09 | EB-3 (0-4) | 20 May 2020 09:57 | | 22 May 2020 08:06 | 23 May 2020 02:36 | 1 |
| **Batch ID:** 153758 ( 0 ) | **Test Name :** LOW-LEVEL TEXAS TPH BY TX1005 | | | | **Matrix:** Water | |
| HS20050835-13 | EB-1 (8-12) | 20 May 2020 09:34 | | 22 May 2020 09:30 | 23 May 2020 03:35 | 1 |
| HS20050835-14 | EB-5 (8-12) | 20 May 2020 10:51 | | 22 May 2020 09:30 | 23 May 2020 04:04 | 1 |
| HS20050835-15 | EB-8 (8-12) | 20 May 2020 11:58 | | 22 May 2020 09:30 | 23 May 2020 04:33 | 1 |
| HS20050835-18 | EB-15 (8-12) Water | 21 May 2020 09:26 | | 22 May 2020 09:30 | 23 May 2020 05:02 | 1 |
| HS20050835-22 | EB-18 (8-12) Water | 21 May 2020 11:32 | | 22 May 2020 09:30 | 23 May 2020 05:31 | 1 |
| HS20050835-27 | EB-22 (8-12) Water | 21 May 2020 11:54 | | 22 May 2020 09:30 | 23 May 2020 06:01 | 1 |
| **Batch ID:** 153801 ( 0 ) | **Test Name :** LOW-LEVEL TEXAS TPH BY TX1005 | | | | **Matrix:** Water | |
| HS20050835-32 | EB-14 Water | 20 May 2020 12:56 | | 26 May 2020 09:53 | 26 May 2020 16:51 | 1 |
| **Batch ID:** 153823 ( 0 ) | **Test Name :** TEXAS TPH BY TX1005 | | | | **Matrix:** Soil | |
| HS20050835-10 | EB-4 (4-8) | 20 May 2020 10:24 | | 26 May 2020 15:21 | 27 May 2020 10:15 | 1 |
| HS20050835-11 | EB-5 (4-8) | 20 May 2020 10:44 | | 26 May 2020 15:21 | 27 May 2020 10:45 | 1 |
| HS20050835-12 | EB-6 (4-8) | 20 May 2020 11:08 | | 26 May 2020 15:21 | 27 May 2020 11:14 | 1 |
| HS20050835-16 | EB-13 (0-4) | 21 May 2020 09:00 | | 26 May 2020 15:21 | 27 May 2020 11:43 | 1 |
| HS20050835-17 | EB-15 (8-12) | 21 May 2020 09:26 | | 26 May 2020 15:21 | 27 May 2020 12:12 | 1 |
| HS20050835-19 | EB-16 (4-8) | 21 May 2020 09:51 | | 26 May 2020 15:21 | 27 May 2020 12:41 | 1 |
| HS20050835-20 | EB-17 (4-8) | 21 May 2020 10:07 | | 26 May 2020 15:21 | 27 May 2020 13:10 | 1 |
| HS20050835-21 | EB-18 (4-8) | 21 May 2020 10:26 | | 26 May 2020 15:21 | 27 May 2020 13:39 | 1 |
| HS20050835-23 | EB-19 (0-4) | 21 May 2020 10:51 | | 26 May 2020 15:21 | 27 May 2020 09:46 | 1 |
| HS20050835-24 | EB-20 (0-4) | 21 May 2020 11:06 | | 26 May 2020 15:21 | 27 May 2020 10:15 | 1 |
| HS20050835-25 | EB-23 (8-12) | 21 May 2020 11:29 | | 26 May 2020 15:21 | 27 May 2020 10:45 | 1 |
| HS20050835-26 | EB-22 (4-8) | 21 May 2020 11:50 | | 26 May 2020 15:21 | 27 May 2020 11:14 | 1 |
| HS20050835-30 | Composite III | 21 May 2020 12:00 | | 26 May 2020 15:21 | 27 May 2020 11:43 | 1 |
| HS20050835-31 | EB-12 | 20 May 2020 13:34 | | 26 May 2020 15:21 | 27 May 2020 12:12 | 1 |
| **Batch ID:** 153832 ( 0 ) | **Test Name :** TCLP VOLATILES | | | | **Matrix:** Soil | |
| HS20050835-28 | Composite I | 21 May 2020 12:00 | 27 May 2020 10:00 | 27 May 2020 14:25 | 28 May 2020 08:53 | 20 |
| **Batch ID:** 153850 ( 0 ) | **Test Name :** TCLP METALS BY SW6020A | | | | **Matrix:** Soil | |
| HS20050835-29 | Composite II | 21 May 2020 12:00 | 27 May 2020 10:00 | 27 May 2020 18:00 | 27 May 2020 23:05 | 1 |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** 153878 ( 0 ) | **Test Name :** TCLP SEMIVOLATILES | | | | **Matrix:** Soil | |
| HS20050835-29 | Composite II | 21 May 2020 12:00 | 27 May 2020 10:00 | 27 May 2020 13:00 | 29 May 2020 16:08 | 1 |
| **Batch ID:** 153922 ( 0 ) | **Test Name :** TCLP MERCURY BY SW7470A | | | | **Matrix:** Soil | |
| HS20050835-29 | Composite II | 21 May 2020 12:00 | 27 May 2020 10:00 | 28 May 2020 10:00 | 28 May 2020 14:00 | 1 |
| **Batch ID:** R361984 ( 0 ) | **Test Name :** FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B | | | | **Matrix:** Soil | |
| HS20050835-28 | Composite I | 21 May 2020 12:00 | | | 22 May 2020 09:30 | 1 |
| **Batch ID:** R362020 ( 0 ) | **Test Name :** REACTIVE SULFIDE | | | | **Matrix:** Soil | |
| HS20050835-28 | Composite I | 21 May 2020 12:00 | | | 22 May 2020 13:00 | 1 |
| **Batch ID:** R362025 ( 0 ) | **Test Name :** REACTIVE CYANIDE | | | | **Matrix:** Soil | |
| HS20050835-28 | Composite I | 21 May 2020 12:00 | | | 22 May 2020 14:30 | 1 |
| **Batch ID:** R362086 ( 0 ) | **Test Name :** MOISTURE | | | | **Matrix:** Soil | |
| HS20050835-01 | EB-7 (8-12) | 20 May 2020 11:26 | | | 23 May 2020 15:23 | 1 |
| HS20050835-02 | EB-8 (0-4) | 20 May 2020 11:45 | | | 23 May 2020 15:23 | 1 |
| HS20050835-03 | EB-9 (0-4) | 20 May 2020 12:18 | | | 23 May 2020 15:23 | 1 |
| HS20050835-04 | EB-10 (4-8) | 20 May 2020 12:35 | | | 23 May 2020 15:23 | 1 |
| HS20050835-05 | EB-11 (8-12) | 20 May 2020 13:51 | | | 23 May 2020 15:23 | 1 |
| HS20050835-06 | EB-14 (4-8) | 20 May 2020 13:00 | | | 23 May 2020 15:23 | 1 |
| HS20050835-07 | EB-1 (0-4) | 20 May 2020 09:16 | | | 23 May 2020 15:23 | 1 |
| HS20050835-08 | EB-2 (0-4) | 20 May 2020 09:45 | | | 23 May 2020 15:23 | 1 |
| HS20050835-09 | EB-3 (0-4) | 20 May 2020 09:57 | | | 23 May 2020 15:23 | 1 |
| HS20050835-10 | EB-4 (4-8) | 20 May 2020 10:24 | | | 23 May 2020 15:23 | 1 |
| HS20050835-11 | EB-5 (4-8) | 20 May 2020 10:44 | | | 23 May 2020 15:23 | 1 |
| HS20050835-12 | EB-6 (4-8) | 20 May 2020 11:08 | | | 23 May 2020 15:23 | 1 |
| HS20050835-16 | EB-13 (0-4) | 21 May 2020 09:00 | | | 23 May 2020 15:23 | 1 |
| HS20050835-17 | EB-15 (8-12) | 21 May 2020 09:26 | | | 23 May 2020 15:23 | 1 |
| HS20050835-19 | EB-16 (4-8) | 21 May 2020 09:51 | | | 23 May 2020 15:23 | 1 |
| HS20050835-20 | EB-17 (4-8) | 21 May 2020 10:07 | | | 23 May 2020 15:23 | 1 |
| HS20050835-21 | EB-18 (4-8) | 21 May 2020 10:26 | | | 23 May 2020 15:23 | 1 |
| HS20050835-23 | EB-19 (0-4) | 21 May 2020 10:51 | | | 23 May 2020 15:23 | 1 |
| HS20050835-24 | EB-20 (0-4) | 21 May 2020 11:06 | | | 23 May 2020 15:23 | 1 |
| HS20050835-25 | EB-23 (8-12) | 21 May 2020 11:29 | | | 23 May 2020 15:23 | 1 |
| **Batch ID:** R362107 ( 0 ) | **Test Name :** LOW LEVEL VOLATILES BY SW8260C | | | | **Matrix:** Water | |
| HS20050835-13 | EB-1 (8-12) | 20 May 2020 09:34 | | | 23 May 2020 22:39 | 5 |
| HS20050835-15 | EB-8 (8-12) | 20 May 2020 11:58 | | | 23 May 2020 20:58 | 1 |
| HS20050835-18 | EB-15 (8-12) Water | 21 May 2020 09:26 | | | 23 May 2020 21:24 | 1 |
| HS20050835-27 | EB-22 (8-12) Water | 21 May 2020 11:54 | | | 23 May 2020 22:14 | 1 |
| HS20050835-32 | EB-14 Water | 20 May 2020 12:56 | | | 23 May 2020 20:07 | 1 |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

## DATES REPORT

| Sample ID | Client Samp ID | Collection Date | Leachate Date | Prep Date | Analysis Date | DF |
|---|---|---|---|---|---|---|
| **Batch ID:** R362147 ( 0 ) | **Test Name :** PH SOIL BY SW9045D | | | | **Matrix:** Soil | |
| HS20050835-28 | Composite I | 21 May 2020 12:00 | | | 26 May 2020 15:35 | 1 |
| **Batch ID:** R362160 ( 0 ) | **Test Name :** VOLATILES BY SW8260C | | | | **Matrix:** Soil | |
| HS20050835-02 | EB-8 (0-4) | 20 May 2020 11:45 | | | 27 May 2020 04:00 | 1 |
| HS20050835-03 | EB-9 (0-4) | 20 May 2020 12:18 | | | 27 May 2020 04:25 | 1 |
| HS20050835-04 | EB-10 (4-8) | 20 May 2020 12:35 | | | 27 May 2020 04:50 | 1 |
| HS20050835-05 | EB-11 (8-12) | 20 May 2020 13:51 | | | 27 May 2020 05:15 | 1 |
| HS20050835-06 | EB-14 (4-8) | 20 May 2020 13:00 | | | 27 May 2020 05:40 | 1 |
| HS20050835-07 | EB-1 (0-4) | 20 May 2020 09:16 | | | 27 May 2020 06:05 | 1 |
| HS20050835-08 | EB-2 (0-4) | 20 May 2020 09:45 | | | 27 May 2020 06:29 | 1 |
| HS20050835-09 | EB-3 (0-4) | 20 May 2020 09:57 | | | 27 May 2020 09:49 | 1 |
| HS20050835-10 | EB-4 (4-8) | 20 May 2020 10:24 | | | 27 May 2020 10:14 | 1 |
| HS20050835-16 | EB-13 (0-4) | 21 May 2020 09:00 | | | 27 May 2020 10:39 | 1 |
| HS20050835-17 | EB-15 (8-12) | 21 May 2020 09:26 | | | 27 May 2020 11:04 | 1 |
| **Batch ID:** R362162 ( 0 ) | **Test Name :** VOLATILES BY SW8260C | | | | **Matrix:** Soil | |
| HS20050835-07 | EB-1 (0-4) | 20 May 2020 09:16 | | | 27 May 2020 15:38 | 50 |
| **Batch ID:** R362167 ( 0 ) | **Test Name :** LOW LEVEL VOLATILES BY SW8260C | | | | **Matrix:** Water | |
| HS20050835-14 | EB-5 (8-12) | 20 May 2020 10:51 | | | 26 May 2020 11:51 | 1 |
| HS20050835-22 | EB-18 (8-12) Water | 21 May 2020 11:32 | | | 26 May 2020 12:14 | 1 |
| **Batch ID:** R362174 ( 0 ) | **Test Name :** MOISTURE | | | | **Matrix:** Soil | |
| HS20050835-26 | EB-22 (4-8) | 21 May 2020 11:50 | | | 26 May 2020 11:29 | 1 |
| HS20050835-31 | EB-12 | 20 May 2020 13:34 | | | 26 May 2020 11:29 | 1 |
| **Batch ID:** R362239 ( 0 ) | **Test Name :** VOLATILES BY SW8260C | | | | **Matrix:** Soil | |
| HS20050835-01 | EB-7 (8-12) | 20 May 2020 11:26 | | | 27 May 2020 16:55 | 1 |
| HS20050835-11 | EB-5 (4-8) | 20 May 2020 10:44 | | | 27 May 2020 17:20 | 1 |
| HS20050835-12 | EB-6 (4-8) | 20 May 2020 11:08 | | | 27 May 2020 17:45 | 1 |
| HS20050835-21 | EB-18 (4-8) | 21 May 2020 10:26 | | | 27 May 2020 18:10 | 1 |
| HS20050835-23 | EB-19 (0-4) | 21 May 2020 10:51 | | | 27 May 2020 18:35 | 1 |
| HS20050835-24 | EB-20 (0-4) | 21 May 2020 11:06 | | | 27 May 2020 19:00 | 1 |
| **Batch ID:** R362241 ( 0 ) | **Test Name :** VOLATILES BY SW8260C | | | | **Matrix:** Soil | |
| HS20050835-19 | EB-16 (4-8) | 21 May 2020 09:51 | | | 28 May 2020 04:07 | 1 |
| HS20050835-20 | EB-17 (4-8) | 21 May 2020 10:07 | | | 28 May 2020 04:32 | 1 |
| HS20050835-25 | EB-23 (8-12) | 21 May 2020 11:29 | | | 28 May 2020 05:22 | 1 |
| HS20050835-26 | EB-22 (4-8) | 21 May 2020 11:50 | | | 28 May 2020 05:47 | 1 |
| HS20050835-30 | Composite III | 21 May 2020 12:00 | | | 28 May 2020 06:12 | 1 |
| HS20050835-31 | EB-12 | 20 May 2020 13:34 | | | 28 May 2020 06:36 | 1 |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153754 ( 0 )** **Instrument: FID-11** **Method: TEXAS TPH BY TX1005**

**MBLK** Sample ID: **MBLK-153754** Units: **mg/Kg** Analysis Date: **22-May-2020 14:57**
Client ID: Run ID: **FID-11_362101** SeqNo: **5595189** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *21.19* | *0* | *25* | *0* | *84.8* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *23.95* | *0* | *25* | *0* | *95.8* | *70 - 130* | | | | |

**LCS** Sample ID: **LCS-153754** Units: **mg/Kg** Analysis Date: **22-May-2020 15:26**
Client ID: Run ID: **FID-11_362101** SeqNo: **5595190** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 266.7 | 50 | 250 | 0 | 107 | 75 - 125 | | | | |
| >nC12 to nC28 | 250.5 | 50 | 250 | 0 | 100 | 75 - 125 | | | | |
| *Surr: 2-Fluorobiphenyl* | *26.6* | *0* | *25* | *0* | *106* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *25.6* | *0* | *25* | *0* | *102* | *70 - 130* | | | | |

**LCSD** Sample ID: **LCSD-153754** Units: **mg/Kg** Analysis Date: **22-May-2020 15:55**
Client ID: Run ID: **FID-11_362101** SeqNo: **5595191** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 260.8 | 50 | 250 | 0 | 104 | 75 - 125 | 266.7 | 2.25 | 20 | |
| >nC12 to nC28 | 277.8 | 50 | 250 | 0 | 111 | 75 - 125 | 250.5 | 10.3 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *26.33* | *0* | *25* | *0* | *105* | *70 - 130* | *26.6* | *1.05* | *20* | |
| *Surr: Trifluoromethyl benzene* | *24.85* | *0* | *25* | *0* | *99.4* | *70 - 130* | *25.6* | *3.01* | *20* | |

**The following samples were analyzed in this batch:** HS20050835-01 HS20050835-02 HS20050835-03 HS20050835-04 HS20050835-05 HS20050835-06 HS20050835-07 HS20050835-08 HS20050835-09

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153758 ( 0 )** **Instrument: FID-10** **Method: LOW-LEVEL TEXAS TPH BY TX1005**

**MBLK** Sample ID: **MBLK-153758** Units: **mg/L** Analysis Date: **22-May-2020 17:23**
Client ID: Run ID: **FID-10_362097** SeqNo: **5595130** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *2.019* | *0* | *2.5* | *0* | *80.8* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.167* | *0* | *2.5* | *0* | *86.7* | *70 - 130* | | | | |

**LCS** Sample ID: **LCS-153758** Units: **mg/L** Analysis Date: **22-May-2020 17:52**
Client ID: Run ID: **FID-10_362097** SeqNo: **5595131** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 20.83 | 0.50 | 25 | 0 | 83.3 | 75 - 125 | | | | |
| >nC12 to nC28 | 27.18 | 0.50 | 25 | 0 | 109 | 75 - 125 | | | | |
| *Surr: 2-Fluorobiphenyl* | *2.454* | *0* | *2.5* | *0* | *98.1* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.275* | *0* | *2.5* | *0* | *91.0* | *70 - 130* | | | | |

**LCSD** Sample ID: **LCSD-153758** Units: **mg/L** Analysis Date: **22-May-2020 18:21**
Client ID: Run ID: **FID-10_362097** SeqNo: **5595132** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 22.36 | 0.50 | 25 | 0 | 89.4 | 75 - 125 | 20.83 | 7.09 | 20 | |
| >nC12 to nC28 | 28.07 | 0.50 | 25 | 0 | 112 | 75 - 125 | 27.18 | 3.23 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *2.418* | *0* | *2.5* | *0* | *96.7* | *70 - 130* | *2.454* | *1.46* | *20* | |
| *Surr: Trifluoromethyl benzene* | *2.237* | *0* | *2.5* | *0* | *89.5* | *70 - 130* | *2.275* | *1.67* | *20* | |

**MS** Sample ID: **HS20050821-01MS** Units: **mg/L** Analysis Date: **22-May-2020 19:19**
Client ID: Run ID: **FID-10_362097** SeqNo: **5595134** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 68.72 | 0.48 | 24.03 | 38.28 | 127 | 75 - 125 | | | | S |
| >nC12 to nC28 | 111.1 | 0.48 | 24.03 | 64.33 | 195 | 75 - 125 | | | | SE |
| *Surr: 2-Fluorobiphenyl* | *2.973* | *0* | *2.403* | *0* | *124* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.219* | *0* | *2.403* | *0* | *92.4* | *70 - 130* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153758 ( 0 )** **Instrument: FID-10** **Method: LOW-LEVEL TEXAS TPH BY TX1005**

**MSD** Sample ID: **HS20050821-01MSD** Units: **mg/L** Analysis Date: **22-May-2020 19:48**
Client ID: Run ID: **FID-10_362097** SeqNo: **5595135** PrepDate: **22-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 44.7 | 0.48 | 23.94 | 38.28 | 26.8 | 75 - 125 | 68.72 | 42.4 | 20 | SR |
| >nC12 to nC28 | 71.19 | 0.48 | 23.94 | 64.33 | 28.6 | 75 - 125 | 111.1 | 43.8 | 20 | SR |
| *Surr: 2-Fluorobiphenyl* | *2.93* | *0* | *2.394* | *0* | *122* | *70 - 130* | *2.973* | *1.46* | *20* | |
| *Surr: Trifluoromethyl benzene* | *2.496* | *0* | *2.394* | *0* | *104* | *70 - 130* | *2.219* | *11.7* | *20* | |

**The following samples were analyzed in this batch:** HS20050835-13 HS20050835-14 HS20050835-15 HS20050835-18 HS20050835-22 HS20050835-27

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153801 ( 0 )** **Instrument: FID-11** **Method: LOW-LEVEL TEXAS TPH BY TX1005**

**MBLK** Sample ID: **MBLK-153801** Units: **mg/L** Analysis Date: **26-May-2020 13:56**
Client ID: Run ID: **FID-11_362193** SeqNo: **5597287** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | < 0.50 | 0.50 | | | | | | | | |
| >nC12 to nC28 | < 0.50 | 0.50 | | | | | | | | |
| >nC28 to nC35 | < 0.50 | 0.50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 0.50 | 0.50 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *2.362* | *0* | *2.5* | *0* | *94.5* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.656* | *0* | *2.5* | *0* | *106* | *70 - 130* | | | | |

**LCS** Sample ID: **LCS-153801** Units: **mg/L** Analysis Date: **26-May-2020 14:25**
Client ID: Run ID: **FID-11_362193** SeqNo: **5597288** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 28.44 | 0.50 | 25 | 0 | 114 | 75 - 125 | | | | |
| >nC12 to nC28 | 29.48 | 0.50 | 25 | 0 | 118 | 75 - 125 | | | | |
| *Surr: 2-Fluorobiphenyl* | *3.042* | *0* | *2.5* | *0* | *122* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.84* | *0* | *2.5* | *0* | *114* | *70 - 130* | | | | |

**LCSD** Sample ID: **LCSD-153801** Units: **mg/L** Analysis Date: **26-May-2020 14:54**
Client ID: Run ID: **FID-11_362193** SeqNo: **5597289** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 25.91 | 0.50 | 25 | 0 | 104 | 75 - 125 | 28.44 | 9.29 | 20 | |
| >nC12 to nC28 | 22.2 | 0.50 | 25 | 0 | 88.8 | 75 - 125 | 29.48 | 28.1 | 20 | R |
| *Surr: 2-Fluorobiphenyl* | *2.749* | *0* | *2.5* | *0* | *110* | *70 - 130* | *3.042* | *10.1* | *20* | |
| *Surr: Trifluoromethyl benzene* | *2.597* | *0* | *2.5* | *0* | *104* | *70 - 130* | *2.84* | *8.96* | *20* | |

**MS** Sample ID: **HS20050940-01MS** Units: **mg/L** Analysis Date: **26-May-2020 15:53**
Client ID: Run ID: **FID-11_362193** SeqNo: **5597291** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 28.92 | 0.49 | 24.35 | 0 | 119 | 75 - 125 | | | | |
| >nC12 to nC28 | 30.33 | 0.49 | 24.35 | 0 | 125 | 75 - 125 | | | | |
| *Surr: 2-Fluorobiphenyl* | *3.073* | *0* | *2.435* | *0* | *126* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *2.864* | *0* | *2.435* | *0* | *118* | *70 - 130* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153801 ( 0 )** **Instrument: FID-11** **Method: LOW-LEVEL TEXAS TPH BY TX1005**

**MSD** Sample ID: **HS20050940-01MSD** Units: **mg/L** Analysis Date: **26-May-2020 16:22**
Client ID: Run ID: **FID-11_362193** SeqNo: **5597292** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 26.11 | 0.49 | 24.6 | 0 | 106 | 75 - 125 | 28.92 | 10.2 | 20 | |
| >nC12 to nC28 | 26.73 | 0.49 | 24.6 | 0 | 109 | 75 - 125 | 30.33 | 12.6 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *2.753* | *0* | *2.46* | *0* | *112* | *70 - 130* | *3.073* | *11* | *20* | |
| *Surr: Trifluoromethyl benzene* | *2.548* | *0* | *2.46* | *0* | *104* | *70 - 130* | *2.864* | *11.7* | *20* | |

**The following samples were analyzed in this batch:** HS20050835-32

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153823 ( 0 )** **Instrument: FID-10** **Method: TEXAS TPH BY TX1005**

**MBLK** Sample ID: **MBLK-153823** Units: **mg/Kg** Analysis Date: **27-May-2020 06:02**
Client ID: Run ID: **FID-10_362161** SeqNo: **5596514** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | < 50 | 50 | | | | | | | | |
| >nC12 to nC28 | < 50 | 50 | | | | | | | | |
| >nC28 to nC35 | < 50 | 50 | | | | | | | | |
| Total Petroleum Hydrocarbon | < 50 | 50 | | | | | | | | |
| *Surr: 2-Fluorobiphenyl* | *18.34* | *0* | *25* | *0* | *73.4* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *22.33* | *0* | *25* | *0* | *89.3* | *70 - 130* | | | | |

**LCS** Sample ID: **LCS-153823** Units: **mg/Kg** Analysis Date: **27-May-2020 06:31**
Client ID: Run ID: **FID-10_362161** SeqNo: **5596515** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 212 | 50 | 250 | 0 | 84.8 | 75 - 125 | | | | |
| >nC12 to nC28 | 252.3 | 50 | 250 | 0 | 101 | 75 - 125 | | | | |
| *Surr: 2-Fluorobiphenyl* | *21.57* | *0* | *25* | *0* | *86.3* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *21.39* | *0* | *25* | *0* | *85.5* | *70 - 130* | | | | |

**LCSD** Sample ID: **LCSD-153823** Units: **mg/Kg** Analysis Date: **27-May-2020 07:00**
Client ID: Run ID: **FID-10_362161** SeqNo: **5596516** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 214.9 | 50 | 250 | 0 | 85.9 | 75 - 125 | 212 | 1.33 | 20 | |
| >nC12 to nC28 | 261.4 | 50 | 250 | 0 | 105 | 75 - 125 | 252.3 | 3.54 | 20 | |
| *Surr: 2-Fluorobiphenyl* | *22.36* | *0* | *25* | *0* | *89.5* | *70 - 130* | *21.57* | *3.63* | *20* | |
| *Surr: Trifluoromethyl benzene* | *21.87* | *0* | *25* | *0* | *87.5* | *70 - 130* | *21.39* | *2.25* | *20* | |

**MS** Sample ID: **HS20050825-05MS** Units: **mg/Kg** Analysis Date: **27-May-2020 06:31**
Client ID: Run ID: **FID-10_362161** SeqNo: **5596519** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 270.1 | 49 | 244.4 | 0 | 111 | 75 - 125 | | | | |
| >nC12 to nC28 | 335.1 | 49 | 244.4 | 12.76 | 132 | 75 - 125 | | | | S |
| *Surr: 2-Fluorobiphenyl* | *25.73* | *0* | *24.44* | *0* | *105* | *70 - 130* | | | | |
| *Surr: Trifluoromethyl benzene* | *24.62* | *0* | *24.44* | *0* | *101* | *70 - 130* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153823 ( 0 )** **Instrument: FID-10** **Method: TEXAS TPH BY TX1005**

**MSD** Sample ID: **HS20050825-05MSD** Units: **mg/Kg** Analysis Date: **27-May-2020 07:00**
Client ID: Run ID: **FID-10_362161** SeqNo: **5596520** PrepDate: **26-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| nC6 to nC12 | 272.5 | 49 | 245.3 | 0 | 111 | 75 - 125 | 270.1 | 0.866 | 20 | |
| >nC12 to nC28 | 340.7 | 49 | 245.3 | 12.76 | 134 | 75 - 125 | 335.1 | 1.66 | 20 | S |
| *Surr: 2-Fluorobiphenyl* | *26.27* | *0* | *24.53* | *0* | *107* | *70 - 130* | *25.73* | *2.06* | *20* | |
| *Surr: Trifluoromethyl benzene* | *24.59* | *0* | *24.53* | *0* | *100* | *70 - 130* | *24.62* | *0.124* | *20* | |

**The following samples were analyzed in this batch:**

| | | | |
|---|---|---|---|
| HS20050835-10 | HS20050835-11 | HS20050835-12 | HS20050835-16 |
| HS20050835-17 | HS20050835-19 | HS20050835-20 | HS20050835-21 |
| HS20050835-23 | HS20050835-24 | HS20050835-25 | HS20050835-26 |
| HS20050835-30 | HS20050835-31 | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153850 ( 0 )** **Instrument: ICPMS05** **Method: TCLP METALS BY SW6020A**

**MBLK** Sample ID: **MBLKT2-153850** Units: **mg/L** Analysis Date: **27-May-2020 22:34**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598288** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 0.0500 | 0.0500 | | | | | | | | |
| Arsenic | < 0.0500 | 0.0500 | | | | | | | | |
| Barium | < 0.200 | 0.200 | | | | | | | | |
| Beryllium | < 0.0200 | 0.0200 | | | | | | | | |
| Cadmium | < 0.0500 | 0.0500 | | | | | | | | |
| Chromium | < 0.0500 | 0.0500 | | | | | | | | |
| Lead | < 0.0500 | 0.0500 | | | | | | | | |
| Nickel | < 0.0500 | 0.0500 | | | | | | | | |
| Selenium | < 0.0500 | 0.0500 | | | | | | | | |
| Silver | < 0.0500 | 0.0500 | | | | | | | | |

**MBLK** Sample ID: **MBLKT3-153850** Units: **mg/L** Analysis Date: **27-May-2020 22:37**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598289** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 0.0500 | 0.0500 | | | | | | | | |
| Arsenic | < 0.0500 | 0.0500 | | | | | | | | |
| Barium | < 0.200 | 0.200 | | | | | | | | |
| Beryllium | < 0.0200 | 0.0200 | | | | | | | | |
| Cadmium | < 0.0500 | 0.0500 | | | | | | | | |
| Chromium | < 0.0500 | 0.0500 | | | | | | | | |
| Lead | < 0.0500 | 0.0500 | | | | | | | | |
| Nickel | < 0.0500 | 0.0500 | | | | | | | | |
| Selenium | < 0.0500 | 0.0500 | | | | | | | | |
| Silver | < 0.0500 | 0.0500 | | | | | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153850 ( 0 )** **Instrument: ICPMS05** **Method: TCLP METALS BY SW6020A**

**MBLK** Sample ID: **MBLKT1-153850** Units: **mg/L** Analysis Date: **27-May-2020 22:32**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598287** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 0.0500 | 0.0500 | | | | | | | | |
| Arsenic | < 0.0500 | 0.0500 | | | | | | | | |
| Barium | < 0.200 | 0.200 | | | | | | | | |
| Beryllium | < 0.0200 | 0.0200 | | | | | | | | |
| Cadmium | < 0.0500 | 0.0500 | | | | | | | | |
| Chromium | < 0.0500 | 0.0500 | | | | | | | | |
| Lead | < 0.0500 | 0.0500 | | | | | | | | |
| Nickel | < 0.0500 | 0.0500 | | | | | | | | |
| Selenium | < 0.0500 | 0.0500 | | | | | | | | |
| Silver | < 0.0500 | 0.0500 | | | | | | | | |

**MBLK** Sample ID: **MBLK-153850** Units: **mg/L** Analysis Date: **27-May-2020 22:29**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598286** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 0.00500 | 0.00500 | | | | | | | | |
| Arsenic | < 0.00500 | 0.00500 | | | | | | | | |
| Barium | < 0.0200 | 0.0200 | | | | | | | | |
| Beryllium | < 0.00200 | 0.00200 | | | | | | | | |
| Cadmium | < 0.00500 | 0.00500 | | | | | | | | |
| Chromium | < 0.00500 | 0.00500 | | | | | | | | |
| Lead | < 0.00500 | 0.00500 | | | | | | | | |
| Nickel | < 0.00500 | 0.00500 | | | | | | | | |
| Selenium | < 0.00500 | 0.00500 | | | | | | | | |
| Silver | < 0.00500 | 0.00500 | | | | | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153850 ( 0 )** **Instrument: ICPMS05** **Method: TCLP METALS BY SW6020A**

**LCS** Sample ID: **LCS-153850** Units: **mg/L** Analysis Date: **27-May-2020 22:39**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598290** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.0457 | 0.00500 | 0.05 | 0 | 91.4 | 80 - 120 | | | | |
| Arsenic | 0.04608 | 0.00500 | 0.05 | 0 | 92.2 | 80 - 120 | | | | |
| Barium | 0.04362 | 0.0200 | 0.05 | 0 | 87.2 | 80 - 120 | | | | |
| Beryllium | 0.04224 | 0.00200 | 0.05 | 0 | 84.5 | 80 - 120 | | | | |
| Cadmium | 0.0458 | 0.00500 | 0.05 | 0 | 91.6 | 80 - 120 | | | | |
| Chromium | 0.04549 | 0.00500 | 0.05 | 0 | 91.0 | 80 - 120 | | | | |
| Lead | 0.04585 | 0.00500 | 0.05 | 0 | 91.7 | 80 - 120 | | | | |
| Nickel | 0.04652 | 0.00500 | 0.05 | 0 | 93.0 | 80 - 120 | | | | |
| Selenium | 0.04723 | 0.00500 | 0.05 | 0 | 94.5 | 80 - 120 | | | | |
| Silver | 0.04496 | 0.00500 | 0.05 | 0 | 89.9 | 80 - 120 | | | | |

**MS** Sample ID: **HS20050887-01MS** Units: **mg/L** Analysis Date: **27-May-2020 22:51**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598295** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.4435 | 0.0500 | 0.5 | 0.00077 | 88.5 | 80 - 120 | | | | |
| Arsenic | 0.448 | 0.0500 | 0.5 | 0.00244 | 89.1 | 80 - 120 | | | | |
| Barium | 0.5274 | 0.200 | 0.5 | 0.109 | 83.7 | 80 - 120 | | | | |
| Beryllium | 0.4133 | 0.0200 | 0.5 | 0.00014 | 82.6 | 80 - 120 | | | | |
| Cadmium | 0.4398 | 0.0500 | 0.5 | -0.00002 | 88.0 | 80 - 120 | | | | |
| Chromium | 0.4432 | 0.0500 | 0.5 | 0.00083 | 88.5 | 80 - 120 | | | | |
| Lead | 0.4486 | 0.0500 | 0.5 | 0.00044 | 89.6 | 80 - 120 | | | | |
| Nickel | 0.4491 | 0.0500 | 0.5 | 0.00384 | 89.1 | 80 - 120 | | | | |
| Selenium | 0.4527 | 0.0500 | 0.5 | 0.0024 | 90.1 | 80 - 120 | | | | |
| Silver | 0.4393 | 0.0500 | 0.5 | 0.00004 | 87.8 | 80 - 120 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153850 ( 0 )** **Instrument: ICPMS05** **Method: TCLP METALS BY SW6020A**

**MSD** Sample ID: **HS20050887-01MSD** Units: **mg/L** Analysis Date: **27-May-2020 22:53**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598296** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.471 | 0.0500 | 0.5 | 0.00077 | 94.1 | 80 - 120 | 0.4435 | 6.02 | 20 | |
| Arsenic | 0.4657 | 0.0500 | 0.5 | 0.00244 | 92.7 | 80 - 120 | 0.448 | 3.87 | 20 | |
| Barium | 0.5431 | 0.200 | 0.5 | 0.109 | 86.8 | 80 - 120 | 0.5274 | 2.94 | 20 | |
| Beryllium | 0.4414 | 0.0200 | 0.5 | 0.00014 | 88.2 | 80 - 120 | 0.4133 | 6.56 | 20 | |
| Cadmium | 0.4606 | 0.0500 | 0.5 | -0.00002 | 92.1 | 80 - 120 | 0.4398 | 4.63 | 20 | |
| Chromium | 0.4562 | 0.0500 | 0.5 | 0.00083 | 91.1 | 80 - 120 | 0.4432 | 2.88 | 20 | |
| Lead | 0.4806 | 0.0500 | 0.5 | 0.00044 | 96.0 | 80 - 120 | 0.4486 | 6.9 | 20 | |
| Nickel | 0.4668 | 0.0500 | 0.5 | 0.00384 | 92.6 | 80 - 120 | 0.4491 | 3.86 | 20 | |
| Selenium | 0.4628 | 0.0500 | 0.5 | 0.0024 | 92.1 | 80 - 120 | 0.4527 | 2.21 | 20 | |
| Silver | 0.4389 | 0.0500 | 0.5 | 0.00004 | 87.8 | 80 - 120 | 0.4393 | 0.0888 | 20 | |

**PDS** Sample ID: **HS20050887-01PDS** Units: **mg/L** Analysis Date: **27-May-2020 22:56**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598297** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.8299 | 0.0500 | 1 | 0.00077 | 82.9 | 75 - 125 | | | | |
| Arsenic | 0.9583 | 0.0500 | 1 | 0.00244 | 95.6 | 75 - 125 | | | | |
| Barium | 1.009 | 0.200 | 1 | 0.109 | 90.0 | 75 - 125 | | | | |
| Beryllium | 0.893 | 0.0200 | 1 | 0.00014 | 89.3 | 75 - 125 | | | | |
| Cadmium | 0.9212 | 0.0500 | 1 | -0.00002 | 92.1 | 75 - 125 | | | | |
| Chromium | 0.9311 | 0.0500 | 1 | 0.00083 | 93.0 | 75 - 125 | | | | |
| Lead | 0.942 | 0.0500 | 1 | 0.00044 | 94.2 | 75 - 125 | | | | |
| Nickel | 0.9437 | 0.0500 | 1 | 0.00384 | 94.0 | 75 - 125 | | | | |
| Selenium | 0.9706 | 0.0500 | 1 | 0.0024 | 96.8 | 75 - 125 | | | | |
| Silver | 0.9715 | 0.0500 | 1 | 0.00004 | 97.1 | 75 - 125 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153850 ( 0 )** **Instrument: ICPMS05** **Method: TCLP METALS BY SW6020A**

**SD** Sample ID: **HS20050887-01SD** Units: **mg/L** Analysis Date: **27-May-2020 22:49**
Client ID: Run ID: **ICPMS05_362185** SeqNo: **5598294** PrepDate: **27-May-2020** DF: **5**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %D | %D Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | < 0.250 | 0.250 | | | | | 0.00077 | 0 | 10 | |
| Arsenic | < 0.250 | 0.250 | | | | | 0.00244 | 0 | 10 | |
| Barium | 0.1057 | 1.00 | | | | | 0.109 | 0 | 10 | J |
| Beryllium | < 0.100 | 0.100 | | | | | 0.00014 | 0 | 10 | |
| Cadmium | < 0.250 | 0.250 | | | | | -0.00002 | 0 | 10 | |
| Chromium | < 0.250 | 0.250 | | | | | 0.00083 | 0 | 10 | |
| Lead | < 0.250 | 0.250 | | | | | 0.00044 | 0 | 10 | |
| Nickel | < 0.250 | 0.250 | | | | | 0.00384 | 0 | 10 | |
| Selenium | < 0.250 | 0.250 | | | | | 0.0024 | 0 | 10 | |
| Silver | < 0.250 | 0.250 | | | | | 0.00004 | 0 | 10 | |

**The following samples were analyzed in this batch:** HS20050835-29

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153922 ( 0 )** **Instrument: HG03** **Method: TCLP MERCURY BY SW7470A**

**MBLK** Sample ID: **MBLKT1-153922** Units: **mg/L** Analysis Date: **28-May-2020 13:52**
Client ID: Run ID: **HG03_362311** SeqNo: **5599756** PrepDate: **28-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | < 0.000200 | 0.000200 | | | | | | | | |

**MBLK** Sample ID: **MBLK-153922** Units: **mg/L** Analysis Date: **28-May-2020 13:44**
Client ID: Run ID: **HG03_362311** SeqNo: **5599751** PrepDate: **28-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | < 0.000200 | 0.000200 | | | | | | | | |

**LCS** Sample ID: **LCS-153922** Units: **mg/L** Analysis Date: **28-May-2020 13:46**
Client ID: Run ID: **HG03_362311** SeqNo: **5599752** PrepDate: **28-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00494 | 0.000200 | 0.005 | 0 | 98.8 | 80 - 120 | | | | |

**MS** Sample ID: **HS20050886-01MS** Units: **mg/L** Analysis Date: **28-May-2020 13:49**
Client ID: Run ID: **HG03_362311** SeqNo: **5599754** PrepDate: **28-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00501 | 0.000200 | 0.005 | 0.000057 | 99.1 | 75 - 125 | | | | |

**MSD** Sample ID: **HS20050886-01MSD** Units: **mg/L** Analysis Date: **28-May-2020 13:51**
Client ID: Run ID: **HG03_362311** SeqNo: **5599755** PrepDate: **28-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00528 | 0.000200 | 0.005 | 0.000057 | 104 | 75 - 125 | 0.00501 | 5.25 | 20 | |

**The following samples were analyzed in this batch:** HS20050835-29

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153878 ( 0 )** **Instrument: SV-4** **Method: TCLP SEMIVOLATILES**

**MBLK** Sample ID: **MBLK-153878** Units: **ug/L** Analysis Date: **28-May-2020 12:34**
Client ID: Run ID: **SV-4_362302** SeqNo: **5599639** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | < 5.0 | 5.0 | | | | | | | | |
| 2,4,6-Trichlorophenol | < 5.0 | 5.0 | | | | | | | | |
| 2,4-Dinitrotoluene | < 5.0 | 5.0 | | | | | | | | |
| Cresols, Total | < 15 | 15 | | | | | | | | |
| Hexachlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| Hexachlorobutadiene | < 5.0 | 5.0 | | | | | | | | |
| Hexachloroethane | < 5.0 | 5.0 | | | | | | | | |
| Nitrobenzene | < 5.0 | 5.0 | | | | | | | | |
| Pentachlorophenol | < 5.0 | 5.0 | | | | | | | | |
| Pyridine | < 5.0 | 5.0 | | | | | | | | |
| *Surr: 2,4,6-Tribromophenol* | *87.23* | *5.0* | *100* | *0* | *87.2* | *39 - 153* | | | | |
| *Surr: 2-Fluorobiphenyl* | *87.2* | *5.0* | *100* | *0* | *87.2* | *40 - 147* | | | | |
| *Surr: 2-Fluorophenol* | *83.32* | *5.0* | *100* | *0* | *83.3* | *21 - 110* | | | | |
| *Surr: 4-Terphenyl-d14* | *83.6* | *5.0* | *100* | *0* | *83.6* | *39 - 141* | | | | |
| *Surr: Nitrobenzene-d5* | *81.87* | *5.0* | *100* | *0* | *81.9* | *37 - 140* | | | | |
| *Surr: Phenol-d6* | *84.17* | *5.0* | *100* | *0* | *84.2* | *11 - 110* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153878 ( 0 )** **Instrument: SV-4** **Method: TCLP SEMIVOLATILES**

**LCS** Sample ID: **LCS-153878** Units: **ug/L** Analysis Date: **28-May-2020 12:55**
Client ID: Run ID: **SV-4_362302** SeqNo: **5599640** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 93.3 | 5.0 | 100 | 0 | 93.3 | 55 - 120 | | | | |
| 2,4,6-Trichlorophenol | 83.52 | 5.0 | 100 | 0 | 83.5 | 55 - 120 | | | | |
| 2,4-Dinitrotoluene | 42.28 | 5.0 | 50 | 0 | 84.6 | 55 - 125 | | | | |
| Cresols, Total | 195.2 | 15 | 250 | 0 | 78.1 | 48 - 115 | | | | |
| Hexachlorobenzene | 40 | 5.0 | 50 | 0 | 80.0 | 55 - 120 | | | | |
| Hexachlorobutadiene | 45.09 | 5.0 | 50 | 0 | 90.2 | 55 - 120 | | | | |
| Hexachloroethane | 38.44 | 5.0 | 50 | 0 | 76.9 | 55 - 120 | | | | |
| Nitrobenzene | 44.46 | 5.0 | 50 | 0 | 88.9 | 55 - 120 | | | | |
| Pentachlorophenol | 80.76 | 5.0 | 100 | 0 | 80.8 | 50 - 135 | | | | |
| Pyridine | 33.71 | 5.0 | 50 | 0 | 67.4 | 30 - 120 | | | | |
| *Surr: 2,4,6-Tribromophenol* | *80.35* | *5.0* | *100* | *0* | *80.3* | *39 - 153* | | | | |
| *Surr: 2-Fluorobiphenyl* | *79.45* | *5.0* | *100* | *0* | *79.4* | *40 - 147* | | | | |
| *Surr: 2-Fluorophenol* | *80.67* | *5.0* | *100* | *0* | *80.7* | *21 - 110* | | | | |
| *Surr: 4-Terphenyl-d14* | *80.83* | *5.0* | *100* | *0* | *80.8* | *39 - 141* | | | | |
| *Surr: Nitrobenzene-d5* | *78.32* | *5.0* | *100* | *0* | *78.3* | *37 - 140* | | | | |
| *Surr: Phenol-d6* | *72.65* | *5.0* | *100* | *0* | *72.7* | *11 - 110* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153878 ( 0 )** **Instrument: SV-4** **Method: TCLP SEMIVOLATILES**

**LCSD** Sample ID: **LCSD-153878** Units: **ug/L** Analysis Date: **28-May-2020 13:16**
Client ID: Run ID: **SV-4_362302** SeqNo: **5599641** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 94.13 | 5.0 | 100 | 0 | 94.1 | 55 - 120 | 93.3 | 0.885 | 20 | |
| 2,4,6-Trichlorophenol | 84.5 | 5.0 | 100 | 0 | 84.5 | 55 - 120 | 83.52 | 1.18 | 20 | |
| 2,4-Dinitrotoluene | 46.32 | 5.0 | 50 | 0 | 92.6 | 55 - 125 | 42.28 | 9.14 | 20 | |
| Cresols, Total | 204.5 | 15 | 250 | 0 | 81.8 | 48 - 115 | 195.2 | 4.66 | 20 | |
| Hexachlorobenzene | 42.23 | 5.0 | 50 | 0 | 84.5 | 55 - 120 | 40 | 5.43 | 20 | |
| Hexachlorobutadiene | 45.78 | 5.0 | 50 | 0 | 91.6 | 55 - 120 | 45.09 | 1.52 | 20 | |
| Hexachloroethane | 39.61 | 5.0 | 50 | 0 | 79.2 | 55 - 120 | 38.44 | 3.02 | 20 | |
| Nitrobenzene | 44.11 | 5.0 | 50 | 0 | 88.2 | 55 - 120 | 44.46 | 0.802 | 20 | |
| Pentachlorophenol | 83.93 | 5.0 | 100 | 0 | 83.9 | 50 - 135 | 80.76 | 3.84 | 20 | |
| Pyridine | 34.06 | 5.0 | 50 | 0 | 68.1 | 30 - 120 | 33.71 | 1.01 | 20 | |
| *Surr: 2,4,6-Tribromophenol* | *84.72* | *5.0* | *100* | *0* | *84.7* | *39 - 153* | *80.35* | *5.3* | *20* | |
| *Surr: 2-Fluorobiphenyl* | *78.84* | *5.0* | *100* | *0* | *78.8* | *40 - 147* | *79.45* | *0.77* | *20* | |
| *Surr: 2-Fluorophenol* | *80.85* | *5.0* | *100* | *0* | *80.9* | *21 - 110* | *80.67* | *0.224* | *20* | |
| *Surr: 4-Terphenyl-d14* | *81.88* | *5.0* | *100* | *0* | *81.9* | *39 - 141* | *80.83* | *1.29* | *20* | |
| *Surr: Nitrobenzene-d5* | *78.16* | *5.0* | *100* | *0* | *78.2* | *37 - 140* | *78.32* | *0.199* | *20* | |
| *Surr: Phenol-d6* | *74.43* | *5.0* | *100* | *0* | *74.4* | *11 - 110* | *72.65* | *2.41* | *20* | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153878 ( 0 )** **Instrument: SV-4** **Method: TCLP SEMIVOLATILES**

**MS** Sample ID: **HS20050886-01MS** Units: **ug/L** Analysis Date: **27-May-2020 20:25**
Client ID: Run ID: **SV-4_362218** SeqNo: **5599708** PrepDate: **27-May-2020** DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,5-Trichlorophenol | 97.37 | 5.0 | 100 | 0 | 97.4 | 55 - 120 | | | | |
| 2,4,6-Trichlorophenol | 84.77 | 5.0 | 100 | 0 | 84.8 | 55 - 120 | | | | |
| 2,4-Dinitrotoluene | 52.06 | 5.0 | 50 | 0 | 104 | 55 - 125 | | | | |
| Cresols, Total | 208.8 | 15 | 250 | 0 | 83.5 | 48 - 115 | | | | |
| Hexachlorobenzene | 45.11 | 5.0 | 50 | 0 | 90.2 | 55 - 120 | | | | |
| Hexachlorobutadiene | 41.14 | 5.0 | 50 | 0 | 82.3 | 55 - 120 | | | | |
| Hexachloroethane | 38.53 | 5.0 | 50 | 0 | 77.1 | 55 - 120 | | | | |
| Nitrobenzene | 44.43 | 5.0 | 50 | 0 | 88.9 | 55 - 120 | | | | |
| Pentachlorophenol | 94.99 | 5.0 | 100 | 0 | 95.0 | 50 - 135 | | | | |
| Pyridine | 37.4 | 5.0 | 50 | 0 | 74.8 | 30 - 120 | | | | |
| *Surr: 2,4,6-Tribromophenol* | *91.23* | *5.0* | *100* | *0* | *91.2* | *39 - 153* | | | | |
| *Surr: 2-Fluorobiphenyl* | *76.85* | *5.0* | *100* | *0* | *76.8* | *40 - 147* | | | | |
| *Surr: 2-Fluorophenol* | *79.03* | *5.0* | *100* | *0* | *79.0* | *21 - 110* | | | | |
| *Surr: 4-Terphenyl-d14* | *98.29* | *5.0* | *100* | *0* | *98.3* | *39 - 141* | | | | |
| *Surr: Nitrobenzene-d5* | *76.3* | *5.0* | *100* | *0* | *76.3* | *37 - 140* | | | | |
| *Surr: Phenol-d6* | *74.59* | *5.0* | *100* | *0* | *74.6* | *11 - 110* | | | | |

**The following samples were analyzed in this batch:** HS20050835-29

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153832 ( 0 )** **Instrument: VOA9** **Method: TCLP VOLATILES**

**MBLK** Sample ID: **MBLK-153832** Units: **ug/L** Analysis Date: **28-May-2020 06:27**
Client ID: Run ID: **VOA9_362267** SeqNo: **5599068** PrepDate: **27-May-2020** DF: **20**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | < 100 | 100 | | | | | | | | |
| 1,2-Dichloroethane | < 100 | 100 | | | | | | | | |
| 1,4-Dichlorobenzene | < 100 | 100 | | | | | | | | |
| 2-Butanone | < 200 | 200 | | | | | | | | |
| Benzene | < 100 | 100 | | | | | | | | |
| Carbon tetrachloride | < 100 | 100 | | | | | | | | |
| Chlorobenzene | < 100 | 100 | | | | | | | | |
| Chloroform | < 100 | 100 | | | | | | | | |
| Tetrachloroethene | < 100 | 100 | | | | | | | | |
| Trichloroethene | < 100 | 100 | | | | | | | | |
| Vinyl chloride | < 40 | 40 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *968.1* | *100* | *1000* | *0* | *96.8* | *70 - 130* | | | | |
| *Surr: 4-Bromofluorobenzene* | *930.3* | *100* | *1000* | *0* | *93.0* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *987* | *100* | *1000* | *0* | *98.7* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *966.2* | *100* | *1000* | *0* | *96.6* | *81 - 120* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153832 ( 0 )** **Instrument: VOA9** **Method: TCLP VOLATILES**

**LCS** Sample ID: **VLCSW-153832** Units: **ug/L** Analysis Date: **28-May-2020 03:12**
Client ID: Run ID: **VOA9_362267** SeqNo: **5599064** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 19.08 | 5.0 | 20 | 0 | 95.4 | 70 - 130 | | | | |
| 1,2-Dichloroethane | 20.27 | 5.0 | 20 | 0 | 101 | 70 - 124 | | | | |
| 1,4-Dichlorobenzene | 19.48 | 5.0 | 20 | 0 | 97.4 | 79 - 113 | | | | |
| 2-Butanone | 30.39 | 10 | 40 | 0 | 76.0 | 70 - 130 | | | | |
| Benzene | 19.2 | 5.0 | 20 | 0 | 96.0 | 74 - 120 | | | | |
| Carbon tetrachloride | 22.05 | 5.0 | 20 | 0 | 110 | 71 - 125 | | | | |
| Chlorobenzene | 20.1 | 5.0 | 20 | 0 | 101 | 76 - 113 | | | | |
| Chloroform | 18.81 | 5.0 | 20 | 0 | 94.1 | 71 - 121 | | | | |
| Tetrachloroethene | 19.97 | 5.0 | 20 | 0 | 99.8 | 76 - 119 | | | | |
| Trichloroethene | 20.45 | 5.0 | 20 | 0 | 102 | 77 - 121 | | | | |
| Vinyl chloride | 16.11 | 2.0 | 20 | 0 | 80.5 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.72* | *5.0* | *50* | *0* | *93.4* | *70 - 130* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.02* | *5.0* | *50* | *0* | *100* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *47.03* | *5.0* | *50* | *0* | *94.1* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *48.58* | *5.0* | *50* | *0* | *97.2* | *81 - 120* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: 153832 ( 0 )** **Instrument: VOA9** **Method: TCLP VOLATILES**

**MS** Sample ID: **HS20050892-05MS** Units: **ug/L** Analysis Date: **28-May-2020 04:49**
Client ID: Run ID: **VOA9_362267** SeqNo: **5599067** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20.15 | 5.0 | 20 | 0 | 101 | 70 - 130 | | | | |
| 1,2-Dichloroethane | 20.67 | 5.0 | 20 | 0 | 103 | 70 - 127 | | | | |
| 1,4-Dichlorobenzene | 18.51 | 5.0 | 20 | 0 | 92.5 | 70 - 114 | | | | |
| 2-Butanone | 26.87 | 10 | 40 | 0 | 67.2 | 70 - 130 | | | | S |
| Benzene | 19.66 | 5.0 | 20 | 0 | 98.3 | 70 - 127 | | | | |
| Carbon tetrachloride | 22.1 | 5.0 | 20 | 0 | 111 | 70 - 130 | | | | |
| Chlorobenzene | 19.99 | 5.0 | 20 | 0 | 99.9 | 70 - 114 | | | | |
| Chloroform | 19.02 | 5.0 | 20 | 0 | 95.1 | 70 - 125 | | | | |
| Tetrachloroethene | 19.56 | 5.0 | 20 | 0 | 97.8 | 70 - 130 | | | | |
| Trichloroethene | 21.09 | 5.0 | 20 | 0 | 105 | 70 - 129 | | | | |
| Vinyl chloride | 17.8 | 2.0 | 20 | 0 | 89.0 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.87* | *5.0* | *50* | *0* | *93.7* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.28* | *5.0* | *50* | *0* | *101* | *82 - 124* | | | | |
| *Surr: Dibromofluoromethane* | *47.31* | *5.0* | *50* | *0* | *94.6* | *77 - 123* | | | | |
| *Surr: Toluene-d8* | *48.77* | *5.0* | *50* | *0* | *97.5* | *82 - 127* | | | | |

**The following samples were analyzed in this batch:** HS20050835-28

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362107 ( 0 )** **Instrument: VOA4** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKW-200523** Units: **ug/L** Analysis Date: **23-May-2020 13:08**
Client ID: Run ID: **VOA4_362107** SeqNo: **5595386** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |
| m,p-Xylene | < 2.0 | 2.0 | | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | | |
| o-Xylene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 1.0 | 1.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *43.51* | *1.0* | *50* | *0* | *87.0* | *70 - 123* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.74* | *1.0* | *50* | *0* | *97.5* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *45.75* | *1.0* | *50* | *0* | *91.5* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *49.59* | *1.0* | *50* | *0* | *99.2* | *81 - 120* | | | | |

**LCS** Sample ID: **VLCSW-200523** Units: **ug/L** Analysis Date: **23-May-2020 12:16**
Client ID: Run ID: **VOA4_362107** SeqNo: **5595385** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 17.17 | 1.0 | 20 | 0 | 85.9 | 74 - 120 | | | | |
| Ethylbenzene | 18.88 | 1.0 | 20 | 0 | 94.4 | 77 - 117 | | | | |
| m,p-Xylene | 39.4 | 2.0 | 40 | 0 | 98.5 | 77 - 122 | | | | |
| Methyl tert-butyl ether | 24.54 | 1.0 | 20 | 0 | 123 | 70 - 130 | | | | |
| o-Xylene | 19.83 | 1.0 | 20 | 0 | 99.1 | 75 - 119 | | | | |
| Toluene | 18.55 | 1.0 | 20 | 0 | 92.8 | 77 - 118 | | | | |
| Xylenes, Total | 59.23 | 1.0 | 60 | 0 | 98.7 | 75 - 122 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *41.66* | *1.0* | *50* | *0* | *83.3* | *70 - 130* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.02* | *1.0* | *50* | *0* | *98.0* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *44.89* | *1.0* | *50* | *0* | *89.8* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *49.54* | *1.0* | *50* | *0* | *99.1* | *81 - 120* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362107 ( 0 )** **Instrument: VOA4** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050884-01MS** Units: **ug/L** Analysis Date: **23-May-2020 14:54**
Client ID: Run ID: **VOA4_362107** SeqNo: **5595390** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 158.6 | 1.0 | 20 | 32.49 | 630 | 70 - 127 | | | | S |
| Ethylbenzene | 90.95 | 1.0 | 20 | 21.37 | 348 | 70 - 124 | | | | S |
| m,p-Xylene | 45.13 | 2.0 | 40 | 0 | 113 | 70 - 130 | | | | |
| Methyl tert-butyl ether | 26.2 | 1.0 | 20 | 0 | 131 | 70 - 130 | | | | S |
| o-Xylene | 22.43 | 1.0 | 20 | 0 | 112 | 70 - 124 | | | | |
| Toluene | 20.67 | 1.0 | 20 | 0 | 103 | 70 - 123 | | | | |
| Xylenes, Total | 67.56 | 1.0 | 60 | 0 | 113 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *43.07* | *1.0* | *50* | *0* | *86.1* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.93* | *1.0* | *50* | *0* | *102* | *81 - 113* | | | | |
| *Surr: Dibromofluoromethane* | *43.73* | *1.0* | *50* | *0* | *87.5* | *77 - 123* | | | | |
| *Surr: Toluene-d8* | *48.75* | *1.0* | *50* | *0* | *97.5* | *82 - 127* | | | | |

**MSD** Sample ID: **HS20050884-01MSD** Units: **ug/L** Analysis Date: **23-May-2020 15:20**
Client ID: Run ID: **VOA4_362107** SeqNo: **5595391** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 151.6 | 1.0 | 20 | 32.49 | 595 | 70 - 127 | 158.6 | 4.51 | 20 | S |
| Ethylbenzene | 86.54 | 1.0 | 20 | 21.37 | 326 | 70 - 124 | 90.95 | 4.97 | 20 | S |
| m,p-Xylene | 42.72 | 2.0 | 40 | 0 | 107 | 70 - 130 | 45.13 | 5.49 | 20 | |
| Methyl tert-butyl ether | 28.79 | 1.0 | 20 | 0 | 144 | 70 - 130 | 26.2 | 9.43 | 20 | S |
| o-Xylene | 21.62 | 1.0 | 20 | 0 | 108 | 70 - 124 | 22.43 | 3.66 | 20 | |
| Toluene | 19.77 | 1.0 | 20 | 0 | 98.9 | 70 - 123 | 20.67 | 4.45 | 20 | |
| Xylenes, Total | 64.34 | 1.0 | 60 | 0 | 107 | 70 - 130 | 67.56 | 4.88 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *43.5* | *1.0* | *50* | *0* | *87.0* | *70 - 126* | *43.07* | *1* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *50.94* | *1.0* | *50* | *0* | *102* | *81 - 113* | *50.93* | *0.0138* | *20* | |
| *Surr: Dibromofluoromethane* | *44.57* | *1.0* | *50* | *0* | *89.1* | *77 - 123* | *43.73* | *1.89* | *20* | |
| *Surr: Toluene-d8* | *50.04* | *1.0* | *50* | *0* | *100* | *82 - 127* | *48.75* | *2.61* | *20* | |

**The following samples were analyzed in this batch:** HS20050835-13 HS20050835-15 HS20050835-18 HS20050835-27 HS20050835-32

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362160 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 02:20**
Client ID: Run ID: **VOA5_362160** SeqNo: **5596500** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 5.0 | 5.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *45.99* | *0* | *50* | *0* | *92.0* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.4* | *0* | *50* | *0* | *98.8* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *46.4* | *0* | *50* | *0* | *92.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *51.61* | *0* | *50* | *0* | *103* | *81 - 118* | | | | |

**LCS** Sample ID: **VLCSS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 01:31**
Client ID: Run ID: **VOA5_362160** SeqNo: **5596499** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 49.81 | 5.0 | 50 | 0 | 99.6 | 75 - 124 | | | | |
| Ethylbenzene | 50.15 | 5.0 | 50 | 0 | 100 | 70 - 123 | | | | |
| m,p-Xylene | 98.7 | 10 | 100 | 0 | 98.7 | 77 - 125 | | | | |
| Methyl tert-butyl ether | 49.22 | 5.0 | 50 | 0 | 98.4 | 70 - 128 | | | | |
| o-Xylene | 51.06 | 5.0 | 50 | 0 | 102 | 78 - 122 | | | | |
| Toluene | 48.19 | 5.0 | 50 | 0 | 96.4 | 76 - 122 | | | | |
| Xylenes, Total | 149.8 | 5.0 | 150 | 0 | 99.8 | 77 - 128 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *50.95* | *0* | *50* | *0* | *102* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.34* | *0* | *50* | *0* | *101* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *50.3* | *0* | *50* | *0* | *101* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *50.92* | *0* | *50* | *0* | *102* | *81 - 118* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362160 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050875-02MS** Units: **ug/Kg** Analysis Date: **27-May-2020 08:59**
Client ID: Run ID: **VOA5_362160** SeqNo: **5596674** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 55.14 | 4.9 | 49 | 0 | 113 | 70 - 130 | | | | |
| Ethylbenzene | 58.9 | 4.9 | 49 | 0 | 120 | 70 - 130 | | | | |
| m,p-Xylene | 116.8 | 9.8 | 98 | 0 | 119 | 70 - 130 | | | | |
| Methyl tert-butyl ether | 52.15 | 4.9 | 49 | 0 | 106 | 70 - 130 | | | | |
| o-Xylene | 58.62 | 4.9 | 49 | 0 | 120 | 70 - 130 | | | | |
| Toluene | 55.33 | 4.9 | 49 | 0 | 113 | 70 - 130 | | | | |
| Xylenes, Total | 175.4 | 4.9 | 147 | 0 | 119 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *48.48* | *0* | *49* | *0* | *98.9* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.51* | *0* | *49* | *0* | *101* | *70 - 130* | | | | |
| *Surr: Dibromofluoromethane* | *48.39* | *0* | *49* | *0* | *98.8* | *70 - 130* | | | | |
| *Surr: Toluene-d8* | *50.2* | *0* | *49* | *0* | *102* | *70 - 130* | | | | |

**MSD** Sample ID: **HS20050875-02MSD** Units: **ug/Kg** Analysis Date: **27-May-2020 09:24**
Client ID: Run ID: **VOA5_362160** SeqNo: **5596675** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 54.38 | 4.9 | 49 | 0 | 111 | 70 - 130 | 55.14 | 1.39 | 30 | |
| Ethylbenzene | 57.29 | 4.9 | 49 | 0 | 117 | 70 - 130 | 58.9 | 2.77 | 30 | |
| m,p-Xylene | 113.2 | 9.8 | 98 | 0 | 115 | 70 - 130 | 116.8 | 3.13 | 30 | |
| Methyl tert-butyl ether | 52.58 | 4.9 | 49 | 0 | 107 | 70 - 130 | 52.15 | 0.818 | 30 | |
| o-Xylene | 57.44 | 4.9 | 49 | 0 | 117 | 70 - 130 | 58.62 | 2.04 | 30 | |
| Toluene | 53.83 | 4.9 | 49 | 0 | 110 | 70 - 130 | 55.33 | 2.75 | 30 | |
| Xylenes, Total | 170.6 | 4.9 | 147 | 0 | 116 | 70 - 130 | 175.4 | 2.77 | 30 | |
| *Surr: 1,2-Dichloroethane-d4* | *48.67* | *0* | *49* | *0* | *99.3* | *70 - 126* | *48.48* | *0.404* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *49.2* | *0* | *49* | *0* | *100* | *70 - 130* | *49.51* | *0.631* | *30* | |
| *Surr: Dibromofluoromethane* | *48.96* | *0* | *49* | *0* | *99.9* | *70 - 130* | *48.39* | *1.16* | *30* | |
| *Surr: Toluene-d8* | *49.46* | *0* | *49* | *0* | *101* | *70 - 130* | *50.2* | *1.5* | *30* | |

**The following samples were analyzed in this batch:**

| | | | |
|---|---|---|---|
| HS20050835-02 | HS20050835-03 | HS20050835-04 | HS20050835-05 |
| HS20050835-06 | HS20050835-07 | HS20050835-08 | HS20050835-09 |
| HS20050835-10 | HS20050835-16 | HS20050835-17 | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362162 ( 0 )** **Instrument: VOA8** **Method: VOLATILES BY SW8260C**

**MBLK** Sample ID: **MBLKW1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 08:08**
Client ID: Run ID: **VOA8_362162** SeqNo: **5596591** PrepDate: DF: **50**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | < 250 | 250 | | | | | | | | |
| m,p-Xylene | < 500 | 500 | | | | | | | | |
| o-Xylene | < 250 | 250 | | | | | | | | |
| Xylenes, Total | < 250 | 250 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *2360* | *0* | *2500* | *0* | *94.4* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *2468* | *0* | *2500* | *0* | *98.7* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *2421* | *0* | *2500* | *0* | *96.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *2489* | *0* | *2500* | *0* | *99.5* | *81 - 118* | | | | |

**LCS** Sample ID: **VLCSW1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 07:18**
Client ID: Run ID: **VOA8_362162** SeqNo: **5596590** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 50.41 | 5.0 | 50 | 0 | 101 | 70 - 123 | | | | |
| m,p-Xylene | 100.9 | 10 | 100 | 0 | 101 | 77 - 125 | | | | |
| o-Xylene | 49.62 | 5.0 | 50 | 0 | 99.2 | 78 - 122 | | | | |
| Xylenes, Total | 150.5 | 5.0 | 150 | 0 | 100 | 77 - 128 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.52* | *0* | *50* | *0* | *93.0* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.95* | *0* | *50* | *0* | *102* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *49.89* | *0* | *50* | *0* | *99.8* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *50.49* | *0* | *50* | *0* | *101* | *81 - 118* | | | | |

**MS** Sample ID: **HS20050881-03MS** Units: **ug/Kg** Analysis Date: **27-May-2020 10:13**
Client ID: Run ID: **VOA8_362162** SeqNo: **5597180** PrepDate: DF: **50000**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 2264000 | 210000 | 2.125e+006 | 454500 | 85.1 | 70 - 130 | | | | |
| m,p-Xylene | 6016000 | 420000 | 4.25e+006 | 1675000 | 102 | 70 - 130 | | | | |
| o-Xylene | 2652000 | 210000 | 2.125e+006 | 735400 | 90.2 | 70 - 130 | | | | |
| Xylenes, Total | 8668000 | 210000 | 6.375e+006 | 2410000 | 98.2 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *1701000* | *0* | *2.125e+006* | *0* | *80.1* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *2098000* | *0* | *2.125e+006* | *0* | *98.7* | *70 - 130* | | | | |
| *Surr: Dibromofluoromethane* | *1941000* | *0* | *2.125e+006* | *0* | *91.4* | *70 - 130* | | | | |
| *Surr: Toluene-d8* | *2049000* | *0* | *2.125e+006* | *0* | *96.4* | *70 - 130* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362162 ( 0 )** **Instrument: VOA8** **Method: VOLATILES BY SW8260C**

**MSD** Sample ID: **HS20050881-03MSD** Units: **ug/Kg** Analysis Date: **27-May-2020 10:38**
Client ID: Run ID: **VOA8_362162** SeqNo: **5597181** PrepDate: DF: **50000**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | 3031000 | 210000 | 2.125e+006 | 454500 | 121 | 70 - 130 | 2264000 | 29 | 30 | |
| m,p-Xylene | 7488000 | 420000 | 4.25e+006 | 1675000 | 137 | 70 - 130 | 6016000 | 21.8 | 30 | S |
| o-Xylene | 3484000 | 210000 | 2.125e+006 | 735400 | 129 | 70 - 130 | 2652000 | 27.1 | 30 | |
| Xylenes, Total | 10970000 | 210000 | 6.375e+006 | 2410000 | 134 | 70 - 130 | 8668000 | 23.5 | 30 | S |
| *Surr: 1,2-Dichloroethane-d4* | *1683000* | *0* | *2.125e+006* | *0* | *79.2* | *70 - 126* | *1701000* | *1.07* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *2135000* | *0* | *2.125e+006* | *0* | *100* | *70 - 130* | *2098000* | *1.76* | *30* | |
| *Surr: Dibromofluoromethane* | *1936000* | *0* | *2.125e+006* | *0* | *91.1* | *70 - 130* | *1941000* | *0.258* | *30* | |
| *Surr: Toluene-d8* | *2106000* | *0* | *2.125e+006* | *0* | *99.1* | *70 - 130* | *2049000* | *2.76* | *30* | |

**The following samples were analyzed in this batch:** HS20050835-07

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKW-200526** Units: **ug/L** Analysis Date: **26-May-2020 11:04**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596680** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | < 1.0 | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | < 1.0 | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | < 1.0 | 1.0 | | | | | | | | |
| 1,2-Dibromoethane | < 1.0 | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | < 1.0 | 1.0 | | | | | | | | |
| 1,2-Dichloroethane | < 1.0 | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | < 1.0 | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | < 1.0 | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | < 1.0 | 1.0 | | | | | | | | |
| 2-Butanone | < 2.0 | 2.0 | | | | | | | | |
| 2-Hexanone | < 2.0 | 2.0 | | | | | | | | |
| 4-Methyl-2-pentanone | < 2.0 | 2.0 | | | | | | | | |
| Acetone | < 2.0 | 2.0 | | | | | | | | |
| Benzene | < 1.0 | 1.0 | | | | | | | | |
| Bromodichloromethane | < 1.0 | 1.0 | | | | | | | | |
| Bromoform | < 1.0 | 1.0 | | | | | | | | |
| Bromomethane | < 1.0 | 1.0 | | | | | | | | |
| Carbon disulfide | < 2.0 | 2.0 | | | | | | | | |
| Carbon tetrachloride | < 1.0 | 1.0 | | | | | | | | |
| Chlorobenzene | < 1.0 | 1.0 | | | | | | | | |
| Chloroethane | < 1.0 | 1.0 | | | | | | | | |
| Chloroform | < 1.0 | 1.0 | | | | | | | | |
| Chloromethane | < 1.0 | 1.0 | | | | | | | | |
| cis-1,2-Dichloroethene | < 1.0 | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | < 1.0 | 1.0 | | | | | | | | |
| Cyclohexane | < 1.0 | 1.0 | | | | | | | | |
| Dibromochloromethane | < 1.0 | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | < 1.0 | 1.0 | | | | | | | | |
| Ethylbenzene | < 1.0 | 1.0 | | | | | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKW-200526** Units: **ug/L** Analysis Date: **26-May-2020 11:04**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596680** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | < 1.0 | 1.0 | | | | | | | | |
| m,p-Xylene | < 2.0 | 2.0 | | | | | | | | |
| Methyl acetate | < 1.0 | 1.0 | | | | | | | | |
| Methyl tert-butyl ether | < 1.0 | 1.0 | | | | | | | | |
| Methylcyclohexane | < 1.0 | 1.0 | | | | | | | | |
| Methylene chloride | < 2.0 | 2.0 | | | | | | | | |
| o-Xylene | < 1.0 | 1.0 | | | | | | | | |
| Styrene | < 1.0 | 1.0 | | | | | | | | |
| Tetrachloroethene | < 1.0 | 1.0 | | | | | | | | |
| Toluene | < 1.0 | 1.0 | | | | | | | | |
| trans-1,2-Dichloroethene | < 1.0 | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | < 1.0 | 1.0 | | | | | | | | |
| Trichloroethene | < 1.0 | 1.0 | | | | | | | | |
| Trichlorofluoromethane | < 1.0 | 1.0 | | | | | | | | |
| Vinyl chloride | < 1.0 | 1.0 | | | | | | | | |
| Xylenes, Total | < 1.0 | 1.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *42.05* | *1.0* | *50* | *0* | *84.1* | *70 - 123* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.37* | *1.0* | *50* | *0* | *96.7* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *47.75* | *1.0* | *50* | *0* | *95.5* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *48.89* | *1.0* | *50* | *0* | *97.8* | *81 - 120* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**LCS** Sample ID: **VLCSW-200526** Units: **ug/L** Analysis Date: **26-May-2020 10:18**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596679** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.05 | 1.0 | 20 | 0 | 100 | 70 - 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 19.27 | 1.0 | 20 | 0 | 96.3 | 70 - 120 | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 18.67 | 1.0 | 20 | 0 | 93.3 | 70 - 130 | | | | |
| 1,1,2-Trichloroethane | 19.57 | 1.0 | 20 | 0 | 97.9 | 77 - 113 | | | | |
| 1,1-Dichloroethane | 19.25 | 1.0 | 20 | 0 | 96.3 | 71 - 122 | | | | |
| 1,1-Dichloroethene | 19.99 | 1.0 | 20 | 0 | 99.9 | 70 - 130 | | | | |
| 1,2,4-Trichlorobenzene | 18.99 | 1.0 | 20 | 0 | 94.9 | 77 - 126 | | | | |
| 1,2-Dibromo-3-chloropropane | 16.09 | 1.0 | 20 | 0 | 80.4 | 70 - 130 | | | | |
| 1,2-Dibromoethane | 19.62 | 1.0 | 20 | 0 | 98.1 | 76 - 123 | | | | |
| 1,2-Dichlorobenzene | 19.61 | 1.0 | 20 | 0 | 98.0 | 77 - 113 | | | | |
| 1,2-Dichloroethane | 17.73 | 1.0 | 20 | 0 | 88.6 | 70 - 124 | | | | |
| 1,2-Dichloropropane | 19.51 | 1.0 | 20 | 0 | 97.5 | 72 - 119 | | | | |
| 1,3-Dichlorobenzene | 19.58 | 1.0 | 20 | 0 | 97.9 | 78 - 118 | | | | |
| 1,4-Dichlorobenzene | 18.83 | 1.0 | 20 | 0 | 94.2 | 79 - 113 | | | | |
| 2-Butanone | 35.3 | 2.0 | 40 | 0 | 88.2 | 70 - 130 | | | | |
| 2-Hexanone | 37.49 | 2.0 | 40 | 0 | 93.7 | 70 - 130 | | | | |
| 4-Methyl-2-pentanone | 41.43 | 2.0 | 40 | 0 | 104 | 70 - 130 | | | | |
| Acetone | 32.99 | 2.0 | 40 | 0 | 82.5 | 70 - 130 | | | | |
| Benzene | 18.24 | 1.0 | 20 | 0 | 91.2 | 74 - 120 | | | | |
| Bromodichloromethane | 19.01 | 1.0 | 20 | 0 | 95.1 | 74 - 122 | | | | |
| Bromoform | 19.58 | 1.0 | 20 | 0 | 97.9 | 73 - 128 | | | | |
| Bromomethane | 22.7 | 1.0 | 20 | 0 | 113 | 70 - 130 | | | | |
| Carbon disulfide | 36.72 | 2.0 | 40 | 0 | 91.8 | 70 - 130 | | | | |
| Carbon tetrachloride | 18.54 | 1.0 | 20 | 0 | 92.7 | 71 - 125 | | | | |
| Chlorobenzene | 18.98 | 1.0 | 20 | 0 | 94.9 | 76 - 113 | | | | |
| Chloroethane | 18.95 | 1.0 | 20 | 0 | 94.7 | 70 - 130 | | | | |
| Chloroform | 18.28 | 1.0 | 20 | 0 | 91.4 | 71 - 121 | | | | |
| Chloromethane | 20.93 | 1.0 | 20 | 0 | 105 | 70 - 129 | | | | |
| cis-1,2-Dichloroethene | 19.84 | 1.0 | 20 | 0 | 99.2 | 75 - 122 | | | | |
| cis-1,3-Dichloropropene | 21.64 | 1.0 | 20 | 0 | 108 | 73 - 127 | | | | |
| Cyclohexane | 18.74 | 1.0 | 20 | 0 | 93.7 | 70 - 130 | | | | |
| Dibromochloromethane | 20.04 | 1.0 | 20 | 0 | 100 | 77 - 122 | | | | |
| Dichlorodifluoromethane | 21.43 | 1.0 | 20 | 0 | 107 | 70 - 130 | | | | |
| Ethylbenzene | 18.88 | 1.0 | 20 | 0 | 94.4 | 77 - 117 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**LCS** Sample ID: **VLCSW-200526** Units: **ug/L** Analysis Date: **26-May-2020 10:18**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596679** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 20.61 | 1.0 | 20 | 0 | 103 | 73 - 127 | | | | |
| m,p-Xylene | 39.33 | 2.0 | 40 | 0 | 98.3 | 77 - 122 | | | | |
| Methyl acetate | 17.55 | 1.0 | 20 | 0 | 87.8 | 76 - 122 | | | | |
| Methyl tert-butyl ether | 14.62 | 1.0 | 20 | 0 | 73.1 | 70 - 130 | | | | |
| Methylcyclohexane | 19.97 | 1.0 | 20 | 0 | 99.8 | 61 - 157 | | | | |
| Methylene chloride | 18.8 | 2.0 | 20 | 0 | 94.0 | 70 - 127 | | | | |
| o-Xylene | 19.7 | 1.0 | 20 | 0 | 98.5 | 75 - 119 | | | | |
| Styrene | 19.99 | 1.0 | 20 | 0 | 99.9 | 72 - 126 | | | | |
| Tetrachloroethene | 21.28 | 1.0 | 20 | 0 | 106 | 76 - 119 | | | | |
| Toluene | 19.2 | 1.0 | 20 | 0 | 96.0 | 77 - 118 | | | | |
| trans-1,2-Dichloroethene | 19.6 | 1.0 | 20 | 0 | 98.0 | 72 - 127 | | | | |
| trans-1,3-Dichloropropene | 21.53 | 1.0 | 20 | 0 | 108 | 77 - 119 | | | | |
| Trichloroethene | 20.11 | 1.0 | 20 | 0 | 101 | 77 - 121 | | | | |
| Trichlorofluoromethane | 21.44 | 1.0 | 20 | 0 | 107 | 70 - 130 | | | | |
| Vinyl chloride | 21.29 | 1.0 | 20 | 0 | 106 | 70 - 130 | | | | |
| Xylenes, Total | 59.03 | 1.0 | 60 | 0 | 98.4 | 75 - 122 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *46.15* | *1.0* | *50* | *0* | *92.3* | *70 - 130* | | | | |
| *Surr: 4-Bromofluorobenzene* | *48.26* | *1.0* | *50* | *0* | *96.5* | *82 - 115* | | | | |
| *Surr: Dibromofluoromethane* | *46.95* | *1.0* | *50* | *0* | *93.9* | *73 - 126* | | | | |
| *Surr: Toluene-d8* | *48.34* | *1.0* | *50* | *0* | *96.7* | *81 - 120* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050905-01MS** Units: **ug/L** Analysis Date: **26-May-2020 13:01**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596685** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 20.41 | 1.0 | 20 | 0 | 102 | 70 - 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 19.76 | 1.0 | 20 | 0 | 98.8 | 70 - 123 | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 22.37 | 1.0 | 20 | 0 | 112 | 70 - 130 | | | | |
| 1,1,2-Trichloroethane | 20.26 | 1.0 | 20 | 0 | 101 | 70 - 117 | | | | |
| 1,1-Dichloroethane | 19.69 | 1.0 | 20 | 0 | 98.5 | 70 - 127 | | | | |
| 1,1-Dichloroethene | 23.66 | 1.0 | 20 | 0 | 118 | 70 - 130 | | | | |
| 1,2,4-Trichlorobenzene | 19.62 | 1.0 | 20 | 0 | 98.1 | 70 - 125 | | | | |
| 1,2-Dibromo-3-chloropropane | 16.33 | 1.0 | 20 | 0 | 81.7 | 70 - 130 | | | | |
| 1,2-Dibromoethane | 19.56 | 1.0 | 20 | 0 | 97.8 | 70 - 124 | | | | |
| 1,2-Dichlorobenzene | 20.68 | 1.0 | 20 | 0 | 103 | 70 - 115 | | | | |
| 1,2-Dichloroethane | 16.87 | 1.0 | 20 | 0 | 84.4 | 70 - 127 | | | | |
| 1,2-Dichloropropane | 20.19 | 1.0 | 20 | 0 | 101 | 70 - 122 | | | | |
| 1,3-Dichlorobenzene | 20.6 | 1.0 | 20 | 0 | 103 | 70 - 119 | | | | |
| 1,4-Dichlorobenzene | 19.73 | 1.0 | 20 | 0 | 98.6 | 70 - 114 | | | | |
| 2-Butanone | 35.65 | 2.0 | 40 | 0 | 89.1 | 70 - 130 | | | | |
| 2-Hexanone | 38.62 | 2.0 | 40 | 0 | 96.5 | 70 - 130 | | | | |
| 4-Methyl-2-pentanone | 42.45 | 2.0 | 40 | 0 | 106 | 70 - 130 | | | | |
| Acetone | 37.52 | 2.0 | 40 | 0 | 93.8 | 70 - 130 | | | | |
| Benzene | 18.61 | 1.0 | 20 | 0 | 93.0 | 70 - 127 | | | | |
| Bromodichloromethane | 20 | 1.0 | 20 | 0 | 100.0 | 70 - 124 | | | | |
| Bromoform | 19.76 | 1.0 | 20 | 0 | 98.8 | 70 - 129 | | | | |
| Bromomethane | 24.97 | 1.0 | 20 | 0 | 125 | 70 - 130 | | | | |
| Carbon disulfide | 42.05 | 2.0 | 40 | 0 | 105 | 70 - 130 | | | | |
| Carbon tetrachloride | 19.9 | 1.0 | 20 | 0 | 99.5 | 70 - 130 | | | | |
| Chlorobenzene | 20.05 | 1.0 | 20 | 0 | 100 | 70 - 114 | | | | |
| Chloroethane | 22.15 | 1.0 | 20 | 0 | 111 | 70 - 130 | | | | |
| Chloroform | 18.36 | 1.0 | 20 | 0 | 91.8 | 70 - 125 | | | | |
| Chloromethane | 24 | 1.0 | 20 | 0 | 120 | 70 - 130 | | | | |
| cis-1,2-Dichloroethene | 20.28 | 1.0 | 20 | 0 | 101 | 70 - 128 | | | | |
| cis-1,3-Dichloropropene | 22.49 | 1.0 | 20 | 0 | 112 | 70 - 125 | | | | |
| Cyclohexane | 17.98 | 1.0 | 20 | 0 | 89.9 | 70 - 130 | | | | |
| Dibromochloromethane | 20.43 | 1.0 | 20 | 0 | 102 | 70 - 124 | | | | |
| Dichlorodifluoromethane | 25.12 | 1.0 | 20 | 0 | 126 | 70 - 130 | | | | |
| Ethylbenzene | 20.66 | 1.0 | 20 | 0 | 103 | 70 - 124 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050905-01MS** Units: **ug/L** Analysis Date: **26-May-2020 13:01**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596685** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 22.23 | 1.0 | 20 | 0 | 111 | 70 - 130 | | | | |
| m,p-Xylene | 41.94 | 2.0 | 40 | 0 | 105 | 70 - 130 | | | | |
| Methyl acetate | 16.12 | 1.0 | 20 | 0 | 80.6 | 76 - 122 | | | | |
| Methyl tert-butyl ether | 14.54 | 1.0 | 20 | 0 | 72.7 | 70 - 130 | | | | |
| Methylcyclohexane | 20.05 | 1.0 | 20 | 0 | 100 | 61 - 158 | | | | |
| Methylene chloride | 19.65 | 2.0 | 20 | 0 | 98.3 | 70 - 128 | | | | |
| o-Xylene | 20.79 | 1.0 | 20 | 0 | 104 | 70 - 124 | | | | |
| Styrene | 20.64 | 1.0 | 20 | 0 | 103 | 70 - 130 | | | | |
| Tetrachloroethene | 23.9 | 1.0 | 20 | 0 | 119 | 70 - 130 | | | | |
| Toluene | 21.28 | 1.0 | 20 | 1.085 | 101 | 70 - 123 | | | | |
| trans-1,2-Dichloroethene | 20.79 | 1.0 | 20 | 0 | 104 | 70 - 130 | | | | |
| trans-1,3-Dichloropropene | 22.48 | 1.0 | 20 | 0 | 112 | 70 - 121 | | | | |
| Trichloroethene | 22.08 | 1.0 | 20 | 0 | 110 | 70 - 129 | | | | |
| Trichlorofluoromethane | 25.14 | 1.0 | 20 | 0 | 126 | 70 - 130 | | | | |
| Vinyl chloride | 24.92 | 1.0 | 20 | 0 | 125 | 70 - 130 | | | | |
| Xylenes, Total | 62.73 | 1.0 | 60 | 0 | 105 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *42.97* | *1.0* | *50* | *0* | *85.9* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *47.91* | *1.0* | *50* | *0* | *95.8* | *81 - 113* | | | | |
| *Surr: Dibromofluoromethane* | *45.43* | *1.0* | *50* | *0* | *90.9* | *77 - 123* | | | | |
| *Surr: Toluene-d8* | *48.67* | *1.0* | *50* | *0* | *97.3* | *82 - 127* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MSD** Sample ID: **HS20050905-01MSD** Units: **ug/L** Analysis Date: **26-May-2020 13:24**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596686** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 19.32 | 1.0 | 20 | 0 | 96.6 | 70 - 130 | 20.41 | 5.51 | 20 | |
| 1,1,2,2-Tetrachloroethane | 19.3 | 1.0 | 20 | 0 | 96.5 | 70 - 123 | 19.76 | 2.35 | 20 | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 19.87 | 1.0 | 20 | 0 | 99.4 | 70 - 130 | 22.37 | 11.8 | 20 | |
| 1,1,2-Trichloroethane | 18.73 | 1.0 | 20 | 0 | 93.7 | 70 - 117 | 20.26 | 7.86 | 20 | |
| 1,1-Dichloroethane | 18.2 | 1.0 | 20 | 0 | 91.0 | 70 - 127 | 19.69 | 7.9 | 20 | |
| 1,1-Dichloroethene | 20.9 | 1.0 | 20 | 0 | 104 | 70 - 130 | 23.66 | 12.4 | 20 | |
| 1,2,4-Trichlorobenzene | 20.16 | 1.0 | 20 | 0 | 101 | 70 - 125 | 19.62 | 2.7 | 20 | |
| 1,2-Dibromo-3-chloropropane | 16.63 | 1.0 | 20 | 0 | 83.2 | 70 - 130 | 16.33 | 1.83 | 20 | |
| 1,2-Dibromoethane | 18.79 | 1.0 | 20 | 0 | 94.0 | 70 - 124 | 19.56 | 4.01 | 20 | |
| 1,2-Dichlorobenzene | 20.28 | 1.0 | 20 | 0 | 101 | 70 - 115 | 20.68 | 1.96 | 20 | |
| 1,2-Dichloroethane | 16.34 | 1.0 | 20 | 0 | 81.7 | 70 - 127 | 16.87 | 3.24 | 20 | |
| 1,2-Dichloropropane | 18.28 | 1.0 | 20 | 0 | 91.4 | 70 - 122 | 20.19 | 9.9 | 20 | |
| 1,3-Dichlorobenzene | 20.07 | 1.0 | 20 | 0 | 100 | 70 - 119 | 20.6 | 2.58 | 20 | |
| 1,4-Dichlorobenzene | 19.32 | 1.0 | 20 | 0 | 96.6 | 70 - 114 | 19.73 | 2.08 | 20 | |
| 2-Butanone | 32.88 | 2.0 | 40 | 0 | 82.2 | 70 - 130 | 35.65 | 8.09 | 20 | |
| 2-Hexanone | 35.99 | 2.0 | 40 | 0 | 90.0 | 70 - 130 | 38.62 | 7.04 | 20 | |
| 4-Methyl-2-pentanone | 38.53 | 2.0 | 40 | 0 | 96.3 | 70 - 130 | 42.45 | 9.67 | 20 | |
| Acetone | 35.43 | 2.0 | 40 | 0 | 88.6 | 70 - 130 | 37.52 | 5.71 | 20 | |
| Benzene | 17.74 | 1.0 | 20 | 0 | 88.7 | 70 - 127 | 18.61 | 4.79 | 20 | |
| Bromodichloromethane | 18.3 | 1.0 | 20 | 0 | 91.5 | 70 - 124 | 20 | 8.85 | 20 | |
| Bromoform | 19.89 | 1.0 | 20 | 0 | 99.4 | 70 - 129 | 19.76 | 0.62 | 20 | |
| Bromomethane | 23.12 | 1.0 | 20 | 0 | 116 | 70 - 130 | 24.97 | 7.7 | 20 | |
| Carbon disulfide | 37.84 | 2.0 | 40 | 0 | 94.6 | 70 - 130 | 42.05 | 10.6 | 20 | |
| Carbon tetrachloride | 18.67 | 1.0 | 20 | 0 | 93.4 | 70 - 130 | 19.9 | 6.38 | 20 | |
| Chlorobenzene | 18.9 | 1.0 | 20 | 0 | 94.5 | 70 - 114 | 20.05 | 5.86 | 20 | |
| Chloroethane | 20.26 | 1.0 | 20 | 0 | 101 | 70 - 130 | 22.15 | 8.92 | 20 | |
| Chloroform | 16.96 | 1.0 | 20 | 0 | 84.8 | 70 - 125 | 18.36 | 7.88 | 20 | |
| Chloromethane | 22.25 | 1.0 | 20 | 0 | 111 | 70 - 130 | 24 | 7.58 | 20 | |
| cis-1,2-Dichloroethene | 19 | 1.0 | 20 | 0 | 95.0 | 70 - 128 | 20.28 | 6.54 | 20 | |
| cis-1,3-Dichloropropene | 20.43 | 1.0 | 20 | 0 | 102 | 70 - 125 | 22.49 | 9.58 | 20 | |
| Cyclohexane | 16.58 | 1.0 | 20 | 0 | 82.9 | 70 - 130 | 17.98 | 8.08 | 20 | |
| Dibromochloromethane | 19.71 | 1.0 | 20 | 0 | 98.6 | 70 - 124 | 20.43 | 3.57 | 20 | |
| Dichlorodifluoromethane | 22.25 | 1.0 | 20 | 0 | 111 | 70 - 130 | 25.12 | 12.1 | 20 | |
| Ethylbenzene | 18.76 | 1.0 | 20 | 0 | 93.8 | 70 - 124 | 20.66 | 9.65 | 20 | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362167 ( 0 )** **Instrument: VOA2** **Method: LOW LEVEL VOLATILES BY SW8260C**

**MSD** Sample ID: **HS20050905-01MSD** Units: **ug/L** Analysis Date: **26-May-2020 13:24**
Client ID: Run ID: **VOA2_362167** SeqNo: **5596686** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 21 | 1.0 | 20 | 0 | 105 | 70 - 130 | 22.23 | 5.7 | 20 | |
| m,p-Xylene | 38.38 | 2.0 | 40 | 0 | 95.9 | 70 - 130 | 41.94 | 8.88 | 20 | |
| Methyl acetate | 15.43 | 1.0 | 20 | 0 | 77.2 | 76 - 122 | 16.12 | 4.36 | 20 | |
| Methyl tert-butyl ether | 13.77 | 1.0 | 20 | 0 | 68.8 | 70 - 130 | 14.54 | 5.46 | 20 | S |
| Methylcyclohexane | 17.77 | 1.0 | 20 | 0 | 88.8 | 61 - 158 | 20.05 | 12.1 | 20 | |
| Methylene chloride | 18.17 | 2.0 | 20 | 0 | 90.9 | 70 - 128 | 19.65 | 7.82 | 20 | |
| o-Xylene | 19.43 | 1.0 | 20 | 0 | 97.2 | 70 - 124 | 20.79 | 6.76 | 20 | |
| Styrene | 19.72 | 1.0 | 20 | 0 | 98.6 | 70 - 130 | 20.64 | 4.52 | 20 | |
| Tetrachloroethene | 22.32 | 1.0 | 20 | 0 | 112 | 70 - 130 | 23.9 | 6.84 | 20 | |
| Toluene | 19.91 | 1.0 | 20 | 1.085 | 94.1 | 70 - 123 | 21.28 | 6.65 | 20 | |
| trans-1,2-Dichloroethene | 19.16 | 1.0 | 20 | 0 | 95.8 | 70 - 130 | 20.79 | 8.13 | 20 | |
| trans-1,3-Dichloropropene | 20.38 | 1.0 | 20 | 0 | 102 | 70 - 121 | 22.48 | 9.82 | 20 | |
| Trichloroethene | 20.52 | 1.0 | 20 | 0 | 103 | 70 - 129 | 22.08 | 7.33 | 20 | |
| Trichlorofluoromethane | 22.79 | 1.0 | 20 | 0 | 114 | 70 - 130 | 25.14 | 9.8 | 20 | |
| Vinyl chloride | 22.7 | 1.0 | 20 | 0 | 113 | 70 - 130 | 24.92 | 9.32 | 20 | |
| Xylenes, Total | 57.81 | 1.0 | 60 | 0 | 96.3 | 70 - 130 | 62.73 | 8.17 | 20 | |
| *Surr: 1,2-Dichloroethane-d4* | *43.24* | *1.0* | *50* | *0* | *86.5* | *70 - 126* | *42.97* | *0.607* | *20* | |
| *Surr: 4-Bromofluorobenzene* | *48.11* | *1.0* | *50* | *0* | *96.2* | *81 - 113* | *47.91* | *0.418* | *20* | |
| *Surr: Dibromofluoromethane* | *46.01* | *1.0* | *50* | *0* | *92.0* | *77 - 123* | *45.43* | *1.28* | *20* | |
| *Surr: Toluene-d8* | *48.13* | *1.0* | *50* | *0* | *96.3* | *82 - 127* | *48.67* | *1.11* | *20* | |

**The following samples were analyzed in this batch:** HS20050835-14 HS20050835-22

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 14:25**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598439** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,1,2-Trichloroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,1-Dichloroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,1-Dichloroethene | < 5.0 | 5.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | < 5.0 | 5.0 | | | | | | | | |
| 1,2-Dibromoethane | < 5.0 | 5.0 | | | | | | | | |
| 1,2-Dichlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| 1,2-Dichloroethane | < 5.0 | 5.0 | | | | | | | | |
| 1,2-Dichloropropane | < 5.0 | 5.0 | | | | | | | | |
| 1,3-Dichlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| 1,4-Dichlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| 2-Butanone | < 10 | 10 | | | | | | | | |
| 2-Hexanone | < 10 | 10 | | | | | | | | |
| 4-Methyl-2-pentanone | < 10 | 10 | | | | | | | | |
| Acetone | < 20 | 20 | | | | | | | | |
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Bromodichloromethane | < 5.0 | 5.0 | | | | | | | | |
| Bromoform | < 5.0 | 5.0 | | | | | | | | |
| Bromomethane | < 10 | 10 | | | | | | | | |
| Carbon disulfide | < 10 | 10 | | | | | | | | |
| Carbon tetrachloride | < 5.0 | 5.0 | | | | | | | | |
| Chlorobenzene | < 5.0 | 5.0 | | | | | | | | |
| Chloroethane | < 10 | 10 | | | | | | | | |
| Chloroform | < 5.0 | 5.0 | | | | | | | | |
| Chloromethane | < 10 | 10 | | | | | | | | |
| cis-1,2-Dichloroethene | < 5.0 | 5.0 | | | | | | | | |
| cis-1,3-Dichloropropene | < 5.0 | 5.0 | | | | | | | | |
| Cyclohexane | < 5.0 | 5.0 | | | | | | | | |
| Dibromochloromethane | < 5.0 | 5.0 | | | | | | | | |
| Dichlorodifluoromethane | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 14:25**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598439** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl acetate | < 5.0 | 5.0 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| Methylcyclohexane | < 5.0 | 5.0 | | | | | | | | |
| Methylene chloride | < 10 | 10 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Styrene | < 5.0 | 5.0 | | | | | | | | |
| Tetrachloroethene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| trans-1,2-Dichloroethene | < 5.0 | 5.0 | | | | | | | | |
| trans-1,3-Dichloropropene | < 5.0 | 5.0 | | | | | | | | |
| Trichloroethene | < 5.0 | 5.0 | | | | | | | | |
| Trichlorofluoromethane | < 5.0 | 5.0 | | | | | | | | |
| Vinyl chloride | < 2.0 | 2.0 | | | | | | | | |
| Xylenes, Total | < 5.0 | 5.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *47.33* | *0* | *50* | *0* | *94.7* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.54* | *0* | *50* | *0* | *99.1* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *46.71* | *0* | *50* | *0* | *93.4* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *50.06* | *0* | *50* | *0* | *100* | *81 - 118* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**LCS** Sample ID: **VLCSS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 13:35**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598438** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 44.63 | 5.0 | 50 | 0 | 89.3 | 72 - 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 52.22 | 5.0 | 50 | 0 | 104 | 71 - 124 | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 45.19 | 5.0 | 50 | 0 | 90.4 | 70 - 130 | | | | |
| 1,1,2-Trichloroethane | 51.12 | 5.0 | 50 | 0 | 102 | 78 - 117 | | | | |
| 1,1-Dichloroethane | 48.55 | 5.0 | 50 | 0 | 97.1 | 76 - 128 | | | | |
| 1,1-Dichloroethene | 48.51 | 5.0 | 50 | 0 | 97.0 | 72 - 130 | | | | |
| 1,2,4-Trichlorobenzene | 50.57 | 5.0 | 50 | 0 | 101 | 70 - 128 | | | | |
| 1,2-Dibromo-3-chloropropane | 49.06 | 5.0 | 50 | 0 | 98.1 | 70 - 128 | | | | |
| 1,2-Dibromoethane | 52.28 | 5.0 | 50 | 0 | 105 | 78 - 120 | | | | |
| 1,2-Dichlorobenzene | 51.02 | 5.0 | 50 | 0 | 102 | 79 - 121 | | | | |
| 1,2-Dichloroethane | 50.2 | 5.0 | 50 | 0 | 100 | 77 - 120 | | | | |
| 1,2-Dichloropropane | 49.29 | 5.0 | 50 | 0 | 98.6 | 77 - 121 | | | | |
| 1,3-Dichlorobenzene | 50.76 | 5.0 | 50 | 0 | 102 | 78 - 121 | | | | |
| 1,4-Dichlorobenzene | 50.67 | 5.0 | 50 | 0 | 101 | 78 - 120 | | | | |
| 2-Butanone | 98.41 | 10 | 100 | 0 | 98.4 | 70 - 128 | | | | |
| 2-Hexanone | 90.79 | 10 | 100 | 0 | 90.8 | 72 - 127 | | | | |
| 4-Methyl-2-pentanone | 106.3 | 10 | 100 | 0 | 106 | 70 - 128 | | | | |
| Acetone | 105 | 20 | 100 | 0 | 105 | 70 - 130 | | | | |
| Benzene | 47.57 | 5.0 | 50 | 0 | 95.1 | 75 - 124 | | | | |
| Bromodichloromethane | 46.11 | 5.0 | 50 | 0 | 92.2 | 78 - 122 | | | | |
| Bromoform | 45.37 | 5.0 | 50 | 0 | 90.7 | 74 - 120 | | | | |
| Bromomethane | 47.66 | 10 | 50 | 0 | 95.3 | 70 - 130 | | | | |
| Carbon disulfide | 84.4 | 10 | 100 | 0 | 84.4 | 70 - 122 | | | | |
| Carbon tetrachloride | 42.57 | 5.0 | 50 | 0 | 85.1 | 72 - 128 | | | | |
| Chlorobenzene | 50.15 | 5.0 | 50 | 0 | 100 | 78 - 122 | | | | |
| Chloroethane | 50.74 | 10 | 50 | 0 | 101 | 70 - 130 | | | | |
| Chloroform | 49.12 | 5.0 | 50 | 0 | 98.2 | 73 - 127 | | | | |
| Chloromethane | 49.73 | 10 | 50 | 0 | 99.5 | 70 - 130 | | | | |
| cis-1,2-Dichloroethene | 48.81 | 5.0 | 50 | 0 | 97.6 | 77 - 125 | | | | |
| cis-1,3-Dichloropropene | 43.68 | 5.0 | 50 | 0 | 87.4 | 78 - 122 | | | | |
| Cyclohexane | 45.44 | 5.0 | 50 | 0 | 90.9 | 74 - 126 | | | | |
| Dibromochloromethane | 43.55 | 5.0 | 50 | 0 | 87.1 | 78 - 120 | | | | |
| Dichlorodifluoromethane | 49.02 | 5.0 | 50 | 0 | 98.0 | 70 - 130 | | | | |
| Ethylbenzene | 50.14 | 5.0 | 50 | 0 | 100 | 70 - 123 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**LCS** Sample ID: **VLCSS1-052720** Units: **ug/Kg** Analysis Date: **27-May-2020 13:35**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598438** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 46.76 | 5.0 | 50 | 0 | 93.5 | 78 - 127 | | | | |
| m,p-Xylene | 98.88 | 10 | 100 | 0 | 98.9 | 77 - 125 | | | | |
| Methyl acetate | 45.51 | 5.0 | 50 | 0 | 91.0 | 69 - 123 | | | | |
| Methyl tert-butyl ether | 47.59 | 5.0 | 50 | 0 | 95.2 | 70 - 128 | | | | |
| Methylcyclohexane | 46.11 | 5.0 | 50 | 0 | 92.2 | 77 - 127 | | | | |
| Methylene chloride | 58.91 | 10 | 50 | 0 | 118 | 71 - 125 | | | | |
| o-Xylene | 50.55 | 5.0 | 50 | 0 | 101 | 78 - 122 | | | | |
| Styrene | 52.86 | 5.0 | 50 | 0 | 106 | 80 - 123 | | | | |
| Tetrachloroethene | 46.96 | 5.0 | 50 | 0 | 93.9 | 70 - 130 | | | | |
| Toluene | 46.69 | 5.0 | 50 | 0 | 93.4 | 76 - 122 | | | | |
| trans-1,2-Dichloroethene | 48.26 | 5.0 | 50 | 0 | 96.5 | 75 - 128 | | | | |
| trans-1,3-Dichloropropene | 43.68 | 5.0 | 50 | 0 | 87.4 | 75 - 123 | | | | |
| Trichloroethene | 51 | 5.0 | 50 | 0 | 102 | 78 - 125 | | | | |
| Trichlorofluoromethane | 46.65 | 5.0 | 50 | 0 | 93.3 | 70 - 130 | | | | |
| Vinyl chloride | 50.3 | 2.0 | 50 | 0 | 101 | 70 - 130 | | | | |
| Xylenes, Total | 149.4 | 5.0 | 150 | 0 | 99.6 | 77 - 128 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *51.35* | *0* | *50* | *0* | *103* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.6* | *0* | *50* | *0* | *101* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *49.95* | *0* | *50* | *0* | *99.9* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *50.03* | *0* | *50* | *0* | *100* | *81 - 118* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050852-02MS** Units: **ug/Kg** Analysis Date: **27-May-2020 15:40**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598442** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 41.41 | 5.0 | 50 | 0 | 82.8 | 70 - 130 | | | | |
| 1,1,2,2-Tetrachloroethane | 49.86 | 5.0 | 50 | 0 | 99.7 | 70 - 130 | | | | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 38.84 | 5.0 | 50 | 0 | 77.7 | 70 - 130 | | | | |
| 1,1,2-Trichloroethane | 47.71 | 5.0 | 50 | 0 | 95.4 | 70 - 130 | | | | |
| 1,1-Dichloroethane | 45.71 | 5.0 | 50 | 0 | 91.4 | 70 - 130 | | | | |
| 1,1-Dichloroethene | 41.36 | 5.0 | 50 | 0 | 82.7 | 70 - 130 | | | | |
| 1,2,4-Trichlorobenzene | 30.49 | 5.0 | 50 | 0 | 61.0 | 70 - 130 | | | | S |
| 1,2-Dibromo-3-chloropropane | 45.82 | 5.0 | 50 | 0 | 91.6 | 70 - 130 | | | | |
| 1,2-Dibromoethane | 47.65 | 5.0 | 50 | 0 | 95.3 | 70 - 120 | | | | |
| 1,2-Dichlorobenzene | 38.94 | 5.0 | 50 | 0 | 77.9 | 70 - 130 | | | | |
| 1,2-Dichloroethane | 45.57 | 5.0 | 50 | 0 | 91.1 | 70 - 130 | | | | |
| 1,2-Dichloropropane | 44.91 | 5.0 | 50 | 0 | 89.8 | 70 - 130 | | | | |
| 1,3-Dichlorobenzene | 39.63 | 5.0 | 50 | 0 | 79.3 | 70 - 130 | | | | |
| 1,4-Dichlorobenzene | 39.54 | 5.0 | 50 | 0 | 79.1 | 70 - 130 | | | | |
| 2-Butanone | 109.2 | 10 | 100 | 0 | 109 | 70 - 130 | | | | |
| 2-Hexanone | 85.63 | 10 | 100 | 0 | 85.6 | 70 - 130 | | | | |
| 4-Methyl-2-pentanone | 102 | 10 | 100 | 0 | 102 | 70 - 128 | | | | |
| Acetone | 231 | 20 | 100 | 69.5 | 161 | 70 - 130 | | | | S |
| Benzene | 43.98 | 5.0 | 50 | 0 | 88.0 | 70 - 130 | | | | |
| Bromodichloromethane | 39.99 | 5.0 | 50 | 0 | 80.0 | 70 - 130 | | | | |
| Bromoform | 39.29 | 5.0 | 50 | 0 | 78.6 | 70 - 130 | | | | |
| Bromomethane | 46.15 | 10 | 50 | 0 | 92.3 | 70 - 130 | | | | |
| Carbon disulfide | 80.44 | 10 | 100 | 0 | 80.4 | 70 - 130 | | | | |
| Carbon tetrachloride | 38.98 | 5.0 | 50 | 0 | 78.0 | 70 - 130 | | | | |
| Chlorobenzene | 44.06 | 5.0 | 50 | 0 | 88.1 | 70 - 130 | | | | |
| Chloroethane | 52.54 | 10 | 50 | 0 | 105 | 70 - 130 | | | | |
| Chloroform | 45.61 | 5.0 | 50 | 0 | 91.2 | 70 - 130 | | | | |
| Chloromethane | 46.81 | 10 | 50 | 0 | 93.6 | 70 - 130 | | | | |
| cis-1,2-Dichloroethene | 45.18 | 5.0 | 50 | 0 | 90.4 | 70 - 130 | | | | |
| cis-1,3-Dichloropropene | 38.28 | 5.0 | 50 | 0 | 76.6 | 70 - 130 | | | | |
| Cyclohexane | 41.52 | 5.0 | 50 | 0 | 83.0 | 74 - 126 | | | | |
| Dibromochloromethane | 38.85 | 5.0 | 50 | 0 | 77.7 | 70 - 130 | | | | |
| Dichlorodifluoromethane | 46.5 | 5.0 | 50 | 0 | 93.0 | 70 - 130 | | | | |
| Ethylbenzene | 44.59 | 5.0 | 50 | 0 | 89.2 | 70 - 130 | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050852-02MS** Units: **ug/Kg** Analysis Date: **27-May-2020 15:40**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598442** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 38.89 | 5.0 | 50 | 0 | 77.8 | 70 - 130 | | | | |
| m,p-Xylene | 85.18 | 10 | 100 | 0 | 85.2 | 70 - 130 | | | | |
| Methyl acetate | 46.28 | 5.0 | 50 | 0 | 92.6 | 69 - 123 | | | | |
| Methyl tert-butyl ether | 43.42 | 5.0 | 50 | 0 | 86.8 | 70 - 130 | | | | |
| Methylcyclohexane | 39.99 | 5.0 | 50 | 0 | 80.0 | 77 - 127 | | | | |
| Methylene chloride | 69.02 | 10 | 50 | 0 | 138 | 70 - 130 | | | | S |
| o-Xylene | 43.19 | 5.0 | 50 | 0 | 86.4 | 70 - 130 | | | | |
| Styrene | 44.96 | 5.0 | 50 | 0 | 89.9 | 70 - 130 | | | | |
| Tetrachloroethene | 42.31 | 5.0 | 50 | 0 | 84.6 | 70 - 130 | | | | |
| Toluene | 43.87 | 5.0 | 50 | 0 | 87.7 | 70 - 130 | | | | |
| trans-1,2-Dichloroethene | 45.77 | 5.0 | 50 | 0 | 91.5 | 70 - 130 | | | | |
| trans-1,3-Dichloropropene | 38.28 | 5.0 | 50 | 0 | 76.6 | 70 - 130 | | | | |
| Trichloroethene | 44.56 | 5.0 | 50 | 0 | 89.1 | 70 - 130 | | | | |
| Trichlorofluoromethane | 44.77 | 5.0 | 50 | 0 | 89.5 | 70 - 130 | | | | |
| Vinyl chloride | 47.85 | 2.0 | 50 | 0 | 95.7 | 70 - 130 | | | | |
| Xylenes, Total | 128.4 | 5.0 | 150 | 0 | 85.6 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *50.4* | *0* | *50* | *0* | *101* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *49.69* | *0* | *50* | *0* | *99.4* | *70 - 130* | | | | |
| *Surr: Dibromofluoromethane* | *49.13* | *0* | *50* | *0* | *98.3* | *70 - 130* | | | | |
| *Surr: Toluene-d8* | *50.39* | *0* | *50* | *0* | *101* | *70 - 130* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MSD** Sample ID: **HS20050852-02MSD** Units: **ug/Kg** Analysis Date: **27-May-2020 16:05**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598443** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 42.66 | 5.0 | 50 | 0 | 85.3 | 70 - 130 | 41.41 | 2.98 | 30 | |
| 1,1,2,2-Tetrachloroethane | 51.87 | 5.0 | 50 | 0 | 104 | 70 - 130 | 49.86 | 3.96 | 30 | |
| 1,1,2-Trichlor-1,2,2-trifluoroethane | 41.08 | 5.0 | 50 | 0 | 82.2 | 70 - 130 | 38.84 | 5.6 | 30 | |
| 1,1,2-Trichloroethane | 48.14 | 5.0 | 50 | 0 | 96.3 | 70 - 130 | 47.71 | 0.882 | 30 | |
| 1,1-Dichloroethane | 46.42 | 5.0 | 50 | 0 | 92.8 | 70 - 130 | 45.71 | 1.55 | 30 | |
| 1,1-Dichloroethene | 42.32 | 5.0 | 50 | 0 | 84.6 | 70 - 130 | 41.36 | 2.3 | 30 | |
| 1,2,4-Trichlorobenzene | 36.37 | 5.0 | 50 | 0 | 72.7 | 70 - 130 | 30.49 | 17.6 | 30 | |
| 1,2-Dibromo-3-chloropropane | 47.05 | 5.0 | 50 | 0 | 94.1 | 70 - 130 | 45.82 | 2.66 | 30 | |
| 1,2-Dibromoethane | 47.61 | 5.0 | 50 | 0 | 95.2 | 70 - 120 | 47.65 | 0.0819 | 30 | |
| 1,2-Dichlorobenzene | 42.97 | 5.0 | 50 | 0 | 85.9 | 70 - 130 | 38.94 | 9.83 | 30 | |
| 1,2-Dichloroethane | 47.1 | 5.0 | 50 | 0 | 94.2 | 70 - 130 | 45.57 | 3.31 | 30 | |
| 1,2-Dichloropropane | 46.44 | 5.0 | 50 | 0 | 92.9 | 70 - 130 | 44.91 | 3.34 | 30 | |
| 1,3-Dichlorobenzene | 43.34 | 5.0 | 50 | 0 | 86.7 | 70 - 130 | 39.63 | 8.94 | 30 | |
| 1,4-Dichlorobenzene | 42.86 | 5.0 | 50 | 0 | 85.7 | 70 - 130 | 39.54 | 8.07 | 30 | |
| 2-Butanone | 114.2 | 10 | 100 | 0 | 114 | 70 - 130 | 109.2 | 4.44 | 30 | |
| 2-Hexanone | 86.58 | 10 | 100 | 0 | 86.6 | 70 - 130 | 85.63 | 1.1 | 30 | |
| 4-Methyl-2-pentanone | 103.2 | 10 | 100 | 0 | 103 | 70 - 128 | 102 | 1.17 | 30 | |
| Acetone | 287.5 | 20 | 100 | 69.5 | 218 | 70 - 130 | 231 | 21.8 | 30 | S |
| Benzene | 45.66 | 5.0 | 50 | 0 | 91.3 | 70 - 130 | 43.98 | 3.74 | 30 | |
| Bromodichloromethane | 42.75 | 5.0 | 50 | 0 | 85.5 | 70 - 130 | 39.99 | 6.69 | 30 | |
| Bromoform | 41.38 | 5.0 | 50 | 0 | 82.8 | 70 - 130 | 39.29 | 5.19 | 30 | |
| Bromomethane | 47.71 | 10 | 50 | 0 | 95.4 | 70 - 130 | 46.15 | 3.34 | 30 | |
| Carbon disulfide | 83.09 | 10 | 100 | 0 | 83.1 | 70 - 130 | 80.44 | 3.23 | 30 | |
| Carbon tetrachloride | 41.25 | 5.0 | 50 | 0 | 82.5 | 70 - 130 | 38.98 | 5.66 | 30 | |
| Chlorobenzene | 46.83 | 5.0 | 50 | 0 | 93.7 | 70 - 130 | 44.06 | 6.09 | 30 | |
| Chloroethane | 53.14 | 10 | 50 | 0 | 106 | 70 - 130 | 52.54 | 1.13 | 30 | |
| Chloroform | 46.79 | 5.0 | 50 | 0 | 93.6 | 70 - 130 | 45.61 | 2.54 | 30 | |
| Chloromethane | 47.48 | 10 | 50 | 0 | 95.0 | 70 - 130 | 46.81 | 1.42 | 30 | |
| cis-1,2-Dichloroethene | 46.78 | 5.0 | 50 | 0 | 93.6 | 70 - 130 | 45.18 | 3.47 | 30 | |
| cis-1,3-Dichloropropene | 39.82 | 5.0 | 50 | 0 | 79.6 | 70 - 130 | 38.28 | 3.94 | 30 | |
| Cyclohexane | 42.83 | 5.0 | 50 | 0 | 85.7 | 74 - 126 | 41.52 | 3.09 | 30 | |
| Dibromochloromethane | 40.6 | 5.0 | 50 | 0 | 81.2 | 70 - 130 | 38.85 | 4.39 | 30 | |
| Dichlorodifluoromethane | 47.51 | 5.0 | 50 | 0 | 95.0 | 70 - 130 | 46.5 | 2.15 | 30 | |
| Ethylbenzene | 46.03 | 5.0 | 50 | 0 | 92.1 | 70 - 130 | 44.59 | 3.18 | 30 | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362239 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MSD** Sample ID: **HS20050852-02MSD** Units: **ug/Kg** Analysis Date: **27-May-2020 16:05**
Client ID: Run ID: **VOA5_362239** SeqNo: **5598443** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | RPD %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 41.95 | 5.0 | 50 | 0 | 83.9 | 70 - 130 | 38.89 | 7.58 | 30 | |
| m,p-Xylene | 90.86 | 10 | 100 | 0 | 90.9 | 70 - 130 | 85.18 | 6.44 | 30 | |
| Methyl acetate | 47.05 | 5.0 | 50 | 0 | 94.1 | 69 - 123 | 46.28 | 1.66 | 30 | |
| Methyl tert-butyl ether | 44.92 | 5.0 | 50 | 0 | 89.8 | 70 - 130 | 43.42 | 3.39 | 30 | |
| Methylcyclohexane | 42.75 | 5.0 | 50 | 0 | 85.5 | 77 - 127 | 39.99 | 6.69 | 30 | |
| Methylene chloride | 66.94 | 10 | 50 | 0 | 134 | 70 - 130 | 69.02 | 3.06 | 30 | S |
| o-Xylene | 45.64 | 5.0 | 50 | 0 | 91.3 | 70 - 130 | 43.19 | 5.51 | 30 | |
| Styrene | 47.68 | 5.0 | 50 | 0 | 95.4 | 70 - 130 | 44.96 | 5.89 | 30 | |
| Tetrachloroethene | 43.98 | 5.0 | 50 | 0 | 88.0 | 70 - 130 | 42.31 | 3.86 | 30 | |
| Toluene | 44.92 | 5.0 | 50 | 0 | 89.8 | 70 - 130 | 43.87 | 2.36 | 30 | |
| trans-1,2-Dichloroethene | 47.02 | 5.0 | 50 | 0 | 94.0 | 70 - 130 | 45.77 | 2.7 | 30 | |
| trans-1,3-Dichloropropene | 39.82 | 5.0 | 50 | 0 | 79.6 | 70 - 130 | 38.28 | 3.94 | 30 | |
| Trichloroethene | 46.25 | 5.0 | 50 | 0 | 92.5 | 70 - 130 | 44.56 | 3.72 | 30 | |
| Trichlorofluoromethane | 45.72 | 5.0 | 50 | 0 | 91.4 | 70 - 130 | 44.77 | 2.11 | 30 | |
| Vinyl chloride | 48.01 | 2.0 | 50 | 0 | 96.0 | 70 - 130 | 47.85 | 0.343 | 30 | |
| Xylenes, Total | 136.5 | 5.0 | 150 | 0 | 91.0 | 70 - 130 | 128.4 | 6.13 | 30 | |
| *Surr: 1,2-Dichloroethane-d4* | *49.79* | *0* | *50* | *0* | *99.6* | *70 - 126* | *50.4* | *1.22* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *50.1* | *0* | *50* | *0* | *100* | *70 - 130* | *49.69* | *0.837* | *30* | |
| *Surr: Dibromofluoromethane* | *49.11* | *0* | *50* | *0* | *98.2* | *70 - 130* | *49.13* | *0.0393* | *30* | |
| *Surr: Toluene-d8* | *51.09* | *0* | *50* | *0* | *102* | *70 - 130* | *50.39* | *1.38* | *30* | |

**The following samples were analyzed in this batch:** HS20050835-01 HS20050835-11 HS20050835-12 HS20050835-21 HS20050835-23 HS20050835-24

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362241 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MBLK** Sample ID: **VBLKS2-052720** Units: **ug/Kg** Analysis Date: **28-May-2020 03:42**
Client ID: Run ID: **VOA5_362241** SeqNo: **5598491** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | < 5.0 | 5.0 | | | | | | | | |
| Ethylbenzene | < 5.0 | 5.0 | | | | | | | | |
| m,p-Xylene | < 10 | 10 | | | | | | | | |
| Methyl tert-butyl ether | < 5.0 | 5.0 | | | | | | | | |
| o-Xylene | < 5.0 | 5.0 | | | | | | | | |
| Toluene | < 5.0 | 5.0 | | | | | | | | |
| Xylenes, Total | < 5.0 | 5.0 | | | | | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *48.3* | *0* | *50* | *0* | *96.6* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *51.09* | *0* | *50* | *0* | *102* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *48.16* | *0* | *50* | *0* | *96.3* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *52.67* | *0* | *50* | *0* | *105* | *81 - 118* | | | | |

**LCS** Sample ID: **VLCSS2-052720** Units: **ug/Kg** Analysis Date: **28-May-2020 02:52**
Client ID: Run ID: **VOA5_362241** SeqNo: **5598490** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 50.28 | 5.0 | 50 | 0 | 101 | 75 - 124 | | | | |
| Ethylbenzene | 50.91 | 5.0 | 50 | 0 | 102 | 70 - 123 | | | | |
| m,p-Xylene | 99.97 | 10 | 100 | 0 | 100.0 | 77 - 125 | | | | |
| Methyl tert-butyl ether | 48.3 | 5.0 | 50 | 0 | 96.6 | 70 - 128 | | | | |
| o-Xylene | 51.31 | 5.0 | 50 | 0 | 103 | 78 - 122 | | | | |
| Toluene | 48.88 | 5.0 | 50 | 0 | 97.8 | 76 - 122 | | | | |
| Xylenes, Total | 151.3 | 5.0 | 150 | 0 | 101 | 77 - 128 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *53.71* | *0* | *50* | *0* | *107* | *76 - 125* | | | | |
| *Surr: 4-Bromofluorobenzene* | *51.78* | *0* | *50* | *0* | *104* | *80 - 120* | | | | |
| *Surr: Dibromofluoromethane* | *51.39* | *0* | *50* | *0* | *103* | *80 - 119* | | | | |
| *Surr: Toluene-d8* | *51.6* | *0* | *50* | *0* | *103* | *81 - 118* | | | | |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362241 ( 0 )** **Instrument: VOA5** **Method: VOLATILES BY SW8260C**

**MS** Sample ID: **HS20050835-31MS** Units: **ug/Kg** Analysis Date: **28-May-2020 07:26**
Client ID: **EB-12** Run ID: **VOA5_362241** SeqNo: **5598512** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 50.83 | 4.9 | 49 | 0 | 104 | 70 - 130 | | | | |
| Ethylbenzene | 51.22 | 4.9 | 49 | 0 | 105 | 70 - 130 | | | | |
| m,p-Xylene | 97.68 | 9.8 | 98 | 0 | 99.7 | 70 - 130 | | | | |
| Methyl tert-butyl ether | 50.22 | 4.9 | 49 | 0 | 102 | 70 - 130 | | | | |
| o-Xylene | 51.75 | 4.9 | 49 | 0 | 106 | 70 - 130 | | | | |
| Toluene | 48.58 | 4.9 | 49 | 0 | 99.1 | 70 - 130 | | | | |
| Xylenes, Total | 149.4 | 4.9 | 147 | 0 | 102 | 70 - 130 | | | | |
| *Surr: 1,2-Dichloroethane-d4* | *51* | *0* | *49* | *0* | *104* | *70 - 126* | | | | |
| *Surr: 4-Bromofluorobenzene* | *50.37* | *0* | *49* | *0* | *103* | *70 - 130* | | | | |
| *Surr: Dibromofluoromethane* | *49.75* | *0* | *49* | *0* | *102* | *70 - 130* | | | | |
| *Surr: Toluene-d8* | *49.77* | *0* | *49* | *0* | *102* | *70 - 130* | | | | |

**MSD** Sample ID: **HS20050835-31MSD** Units: **ug/Kg** Analysis Date: **28-May-2020 07:51**
Client ID: **EB-12** Run ID: **VOA5_362241** SeqNo: **5598513** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 48.4 | 4.9 | 49 | 0 | 98.8 | 70 - 130 | 50.83 | 4.91 | 30 | |
| Ethylbenzene | 48.58 | 4.9 | 49 | 0 | 99.1 | 70 - 130 | 51.22 | 5.3 | 30 | |
| m,p-Xylene | 94.46 | 9.8 | 98 | 0 | 96.4 | 70 - 130 | 97.68 | 3.36 | 30 | |
| Methyl tert-butyl ether | 47.23 | 4.9 | 49 | 0 | 96.4 | 70 - 130 | 50.22 | 6.14 | 30 | |
| o-Xylene | 49.53 | 4.9 | 49 | 0 | 101 | 70 - 130 | 51.75 | 4.38 | 30 | |
| Toluene | 47 | 4.9 | 49 | 0 | 95.9 | 70 - 130 | 48.58 | 3.32 | 30 | |
| Xylenes, Total | 144 | 4.9 | 147 | 0 | 97.9 | 70 - 130 | 149.4 | 3.71 | 30 | |
| *Surr: 1,2-Dichloroethane-d4* | *50.71* | *0* | *49* | *0* | *103* | *70 - 126* | *51* | *0.572* | *30* | |
| *Surr: 4-Bromofluorobenzene* | *50.17* | *0* | *49* | *0* | *102* | *70 - 130* | *50.37* | *0.403* | *30* | |
| *Surr: Dibromofluoromethane* | *49.1* | *0* | *49* | *0* | *100* | *70 - 130* | *49.75* | *1.32* | *30* | |
| *Surr: Toluene-d8* | *50.56* | *0* | *49* | *0* | *103* | *70 - 130* | *49.77* | *1.59* | *30* | |

**The following samples were analyzed in this batch:** HS20050835-19 HS20050835-20 HS20050835-25 HS20050835-26 HS20050835-30 HS20050835-31

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID:** R361984 ( 0 ) **Instrument:** WetChem_HS **Method:** FLASH POINT BY CLEVELAND OPEN CUP ASTM D92-12B

**DUP** Sample ID: **HS20050640-01DUP** Units: **°F** Analysis Date: **22-May-2020 09:30**
Client ID: Run ID: **WetChem_HS_361984** SeqNo: **5592883** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Flash Point | > 212 | 50.0 | | | | | 0 | 0 | 30 | |

**The following samples were analyzed in this batch:** HS20050835-28

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362020 ( 0 )** **Instrument: WetChem_HS** **Method: REACTIVE SULFIDE**

**MBLK** Sample ID: **MBLK-R362020** Units: **mg/Kg** Analysis Date: **22-May-2020 13:00**
Client ID: Run ID: **WetChem_HS_362020** SeqNo: **5593455** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Sulfide | < 100 | 100 | | | | | | | | |

**LCS** Sample ID: **LCS-R362020** Units: **mg/Kg** Analysis Date: **22-May-2020 13:00**
Client ID: Run ID: **WetChem_HS_362020** SeqNo: **5593454** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Sulfide | 64 | 100 | 100 | 0 | 64.0 | 20 - 120 | | | | J |

**MS** Sample ID: **HS20050815-01MS** Units: **mg/Kg** Analysis Date: **22-May-2020 13:00**
Client ID: Run ID: **WetChem_HS_362020** SeqNo: **5593456** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Sulfide | 56 | 100 | 100 | -8 | 64.0 | 20 - 120 | | | | J |

**The following samples were analyzed in this batch:** HS20050835-28

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362025 ( 0 )** **Instrument: UV-2450** **Method: REACTIVE CYANIDE**

**MBLK** Sample ID: **MBLK-R362025** Units: **mg/Kg** Analysis Date: **22-May-2020 14:30**
Client ID: Run ID: **UV-2450_362025** SeqNo: **5593531** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Cyanide | < 100 | 100 | | | | | | | | |

**LCS** Sample ID: **LCS-R362025** Units: **mg/Kg** Analysis Date: **22-May-2020 14:30**
Client ID: Run ID: **UV-2450_362025** SeqNo: **5593530** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Cyanide | 0.66 | 100 | 10 | 0 | 6.60 | 5 - 100 | | | | J |

**MS** Sample ID: **HS20050815-01MS** Units: **mg/Kg** Analysis Date: **22-May-2020 14:30**
Client ID: Run ID: **UV-2450_362025** SeqNo: **5593532** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Reactive Cyanide | 0.64 | 100 | 10 | 0.02 | 6.20 | 5 - 100 | | | | J |

**The following samples were analyzed in this batch:** HS20050835-28

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID:** **R362086 ( 0 )** **Instrument:** **Balance1** **Method:** **MOISTURE**

**DUP** Sample ID: **HS20050835-25DUP** Units: **wt%** Analysis Date: **23-May-2020 15:23**
Client ID: **EB-23 (8-12)** Run ID: **Balance1_362086** SeqNo: **5594930** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 18.1 | 0.0100 | | | | | 17.8 | 1.67 | 20 | |

**The following samples were analyzed in this batch:**

| | | | |
|---|---|---|---|
| HS20050835-01 | HS20050835-02 | HS20050835-03 | HS20050835-04 |
| HS20050835-05 | HS20050835-06 | HS20050835-07 | HS20050835-08 |
| HS20050835-09 | HS20050835-10 | HS20050835-11 | HS20050835-12 |
| HS20050835-16 | HS20050835-17 | HS20050835-19 | HS20050835-20 |
| HS20050835-21 | HS20050835-23 | HS20050835-24 | HS20050835-25 |

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID: R362147 ( 0 )** **Instrument: WetChem_HS** **Method: PH SOIL BY SW9045D**

**DUP** Sample ID: **HS20050903-02DUP** Units: **pH Units** Analysis Date: **26-May-2020 15:35**
Client ID: Run ID: **WetChem_HS_362147** SeqNo: **5596111** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.74 | 0.100 | | | | | 7.8 | 0.772 | 10 | |
| Temp Deg C @pH | 21.4 | 0 | | | | | 21.2 | 0.939 | 10 | |

**The following samples were analyzed in this batch:** HS20050835-28

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** HS20050835

**QC BATCH REPORT**

**Batch ID:** **R362174 ( 0 )** **Instrument:** **Balance1** **Method:** **MOISTURE**

**DUP** Sample ID: **HS20050814-06DUP** Units: **wt%** Analysis Date: **26-May-2020 11:29**
Client ID: Run ID: **Balance1_362174** SeqNo: **5596827** PrepDate: DF: **1**

| Analyte | Result | PQL | SPK Val | SPK Ref Value | %REC | Control Limit | RPD Ref Value | %RPD | RPD Limit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 20.5 | 0.0100 | | | | | 21.2 | 3.36 | 20 | |

**The following samples were analyzed in this batch:** HS20050835-26 HS20050835-31

**Client:** HVJ Associates
**Project:** Phase II ESA project
**WorkOrder:** **HS20050835**

**QUALIFIERS, ACRONYMS, UNITS**

| Qualifier | Description |
|---|---|
| * | Value exceeds Regulatory Limit |
| a | Not accredited |
| B | Analyte detected in the associated Method Blank above the Reporting Limit |
| E | Value above quantitation range |
| H | Analyzed outside of Holding Time |
| J | Analyte detected below quantitation limit |
| M | Manually integrated, see raw data for justification |
| n | Not offered for accreditation |
| ND | Not Detected at the Reporting Limit |
| O | Sample amount is > 4 times amount spiked |
| P | Dual Column results percent difference > 40% |
| R | RPD above laboratory control limit |
| S | Spike Recovery outside laboratory control limits |
| U | Analyzed but not detected above the MDL/SDL |

| Acronym | Description |
|---|---|
| DCS | Detectability Check Study |
| DUP | Method Duplicate |
| LCS | Laboratory Control Sample |
| LCSD | Laboratory Control Sample Duplicate |
| MBLK | Method Blank |
| MDL | Method Detection Limit |
| MQL | Method Quantitation Limit |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| PDS | Post Digestion Spike |
| PQL | Practical Quantitaion Limit |
| SD | Serial Dilution |
| SDL | Sample Detection Limit |
| TRRP | Texas Risk Reduction Program |

| Unit Reported | Description |
|---|---|
| Date | |
| mg/Kg | Milligrams per Kilogram |
| mg/L | Milligrams per Liter |

## CERTIFICATIONS,ACCREDITATIONS & LICENSES

| Agency | Number | Expire Date |
|---|---|---|
| Arkansas | 20-030-0 | 26-Mar-2021 |
| Dept of Defense | ANAB L2231 V009 | 22-Dec-2021 |
| Florida | E87611-28 | 30-Jun-2020 |
| Kansas | E-10352 2019-2020 | 31-Jul-2020 |
| Louisiana | 03087, 2019-2020 | 30-Jun-2020 |
| Maryland | 343, 2019-2020 | 30-Jun-2020 |
| North Carolina | 624-2020 | 31-Dec-2020 |
| Oklahoma | 2019-141 | 31-Aug-2020 |
| Texas | T104704231-20-26 | 30-Apr-2021 |

## Sample Receipt Checklist

**Work Order ID:** HS20050835 **Date/Time Received:** **21-May-2020 15:57**

**Client Name:** HVJ HOU **Received by:** **Paresh M. Giga**

**Completed By:** */S/ Jared R. Makan* (eSignature) 21-May-2020 19:10 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

Matrices: **Water, Soil** Carrier name: **Client**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☑ | Not Present ☐ |
| Chain of custody present? | Yes ☑ | No ☐ | 4 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:222067, 222065, 222066, 222064 |
| Samplers name present on COC? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☐ | No ☑ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 3.4°C/3.4°C, 2.5°C/2.5°C, 3.2°C/3.2°C, 1.9°C/1.9°C UC/C | IR25 |
| Cooler(s)/Kit(s): | 45081, 45141, 43986, 45968 | |
| Date/Time sample(s) sent to storage: | 05/21/2020 19:15 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | | | |

Login Notes: Samples EB-12 (Soil) & EB-14 (Water) received, not listed on COCs. Samples logged in for analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

## Sample Receipt Checklist

**Work Order ID:** HS20050835 **Date/Time Received:** **21-May-2020 15:57**

**Client Name:** HVJ HOU **Received by:** **Paresh M. Giga**

**Completed By:** */S/ Jared R. Makan* (eSignature) 21-May-2020 19:18 (Date/Time) **Reviewed by:** (eSignature) (Date/Time)

Matrices: **Water, Soil** Carrier name: **Client**

| | | | |
|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on shipping container/cooler? | Yes ☑ | No ☐ | Not Present ☐ |
| Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes ☐ | No ☐ | Not Present ☑ |
| Chain of custody present? | Yes ☑ | No ☐ | 4 Page(s) |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | COC IDs:222067, 222065, 222066, 222064 |
| Samplers name present on COC? | Yes ☑ | No ☐ | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| Sample containers intact? | Yes ☑ | No ☐ | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| All samples received within holding time? | Yes ☑ | No ☐ | |
| Container/Temp Blank temperature in compliance? | Yes ☑ | No ☐ | |

| | | |
|---|---|---|
| Temperature(s)/Thermometer(s): | 3.4°C/3.4°C, 2.5°C/2.5°C, 3.2°C/3.2°C, 1.9°C/1.9°C UC/C | IR25 |
| Cooler(s)/Kit(s): | 45081, 45141, 43986, 45968 | |
| Date/Time sample(s) sent to storage: | 05/21/2020 19:15 | |

| | | | |
|---|---|---|---|
| Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted? | Yes ☐ | No ☐ | N/A ☑ |
| pH adjusted by: | | | |

Login Notes:

The following sample collection times differ:

| | COC | Sample |
|---|---|---|
| EB-10 (4-8) | 12.25 | 12:35 |
| EB-14 (4-8) | 13.30 | 13:00 |
| EB-1 (8-12) | 09:45 | 09:16 |
| EB-18 (8-12) | 10.32 | 11:32 |
| EB-23 (8-12) | 11:26 | 11:29 |

Logged in per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

# Chain of Custody Form

Page 1 of 4

COC ID: 222067

**HS20050835**

HVJ Associates
Phase II ESA project

ALS Project Manager:

| Customer Information | | Project Information | |
|---|---|---|---|
| Purchase Order | | Project Name | Phase II ESA project |
| Work Order | | Project Number | HE2010043 |
| Company Name | HVJ Associates | Bill To Company | HVJ Associates |
| Send Report To | Ed Hawkinson | Invoice Attn | Ed Hawkinson |
| Address | 6120 S. Dairy Ashford Rd. | Address | 6120 S. Dairy Ashford Rd. |
| City/State/Zip | Houston, TX 770721010 | City/State/Zip | Houston TX 770721010 |
| Phone | (281) 983-8829 | Phone | (281) 983-7293 |
| Fax | (281) 983-7293 | Fax | (281) 983-7293 |
| e-Mail Address | ehawkinson@hvj.com | e-Mail Address | ehawkinson@hvj.com |

| | |
|---|---|
| A | 8260 (5035/8260 BTEX & MTBE) |
| B | 8260 (TCL 4.3 VOC (5035/8260)) |
| C | TX1005 (TPH) |
| D | 1311_METALS_HS (TCLP RCRA 11 Metals) |
| E | 1311_VOC (TCLP VOC) |
| F | 1311_SV (TCLP SVOC) |
| G | RCI |
| H | 8260_S BTEX |
| I | Moisture |
| J | |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-7 (8-12) | 5/20/20 | 11:26a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 2 | EB-8 (0-4) | 5/20/20 | 11:45a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 3 | EB-9 (0-4) | 5/20/20 | 12:18p | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 4 | EB-10 (4-8) | 5/20/20 | 12:25p | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 5 | EB-11 (8-12) | 5/20/20 | 1:51p | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 6 | EB-14 (4-8) | 5/20/20 | 1:30p | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Alexandra Milne

Shipment Method:

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

| | | | | |
|---|---|---|---|---|
| Relinquished by: | Date: 5/21/20 | Time: 15:57 | Received by: | |
| Relinquished by: | Date: | Time: | Received by (Laboratory): 5/21/2020 15:57 | |
| Logged by (Laboratory): | Date: | Time: | Checked by (Laboratory): | |

Notes: Phase II ESA project

| Cooler ID | Cooler Temp. |
|---|---|
| 45081 | 3.4° |
| 45141 | 2.5° |
| 43986 | 3.2° |
| 45968 | 1.9° |

QC Package: (Check One Box Below)

- ☒ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

# Chain of Custody Form



COC ID: 222065

**HS20050835**

HVJ Associates
Phase II ESA project

| Customer Information | | Project Information | | ALS Project Manager: | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | Phase II ESA project | A | 8260 (5035/8260 BTEX & MTBE) |
| Work Order | | Project Number | HE20100043 | B | 8260 (TCL 4.3 VOC (5035/8260)) |
| Company Name | HVJ Associates | Bill To Company | HVJ Associates | C | TX1005 (TPH) |
| Send Report To | Ed Hawkinson | Invoice Attn | Ed Hawkinson | D | 1311_METALS_HS (TCLP RCRA 11 Metals) |
| Address | 6120 S. Dairy Ashford Rd. | Address | 6120 S. Dairy Ashford Rd. | E | 1311_VOC (TCLP VOC) |
| | | | | F | 1311_SV (TCLP SVOC) |
| City/State/Zip | Houston, TX 770721010 | City/State/Zip | Houston TX 770721010 | G | RCI |
| Phone | (281) 983-8829 | Phone | (281) 983-8829 | H | 8260_S BTEX |
| Fax | (281) 983-7293 | Fax | (281) 983-7293 | I | Moisture |
| e-Mail Address | ehawkinson@hvj.com | e-Mail Address | ehawkinson@hvj.com | J | MTBE 8260 |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-1 (0-4) | 5/20/20 | 9:16a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 2 | EB-2 (0-4) | 5/20/20 | 9:45a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 3 | EB-3 (0-4) | 5/20/20 | 9:57a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 4 | EB-4 (4-8) | 5/20/20 | 10:24a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 5 | EB-5 (4-8) | 5/20/20 | 10:44a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 6 | EB-6 (4-8) | 5/20/20 | 11:08a | Soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 7 | EB-1 (8-12) | 5/20/20 | 9:45a | Water | | 6 | | | 3 | | | | | | | 3 | |
| 8 | EB-5 (8-12) | 5/20/20 | 10:51a | Water | | 6 | | | 3 | | | | | | | 3 | |
| 9 | EB-8 (8-12) | 5/20/20 | 11:58a | Water | | 6 | | | 3 | | | | | | | 3 | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Alexandra Milne Alexandra Milne

Shipment Method:

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: [signature] Date: 5/21/20 Time: 15:57 Received by:

Relinquished by: Date: Time: Received by (Laboratory):

Logged by (Laboratory): Date: Time: Checked by (Laboratory): 5/21/2020 15:37

Notes: Phase II ESA project

| Cooler ID | Cooler Temp. |
|---|---|
| | |
| | |
| | |

QC Package: (Check One Box Below)
☒ Level II Std QC
☐ Level III Std QC/Raw Data
☐ Level IV SW846/CLP
☐ Other
☐ TRRP Checklist
☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

# Chain of Custody Form



COC ID: 222066

**HS20050835**

HVJ Associates
Phase II ESA project

| Customer Information | | Project Information | | ALS Project Manager: | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | Phase II ESA project | A | 8260 (5035/8260 BTEX & MTBE) |
| Work Order | | Project Number | HE2010043 | B | 8260 (TCL 4.3 VOC (5035/8260)) |
| Company Name | HVJ Associates | Bill To Company | HVJ Associates | C | TX1005 (TPH) |
| Send Report To | Ed Hawkinson | Invoice Attn | Ed Hawkinson | D | 1311_METALS_HS (TCLP RCRA 11 Metals) |
| Address | 6120 S. Dairy Ashford Rd. | Address | 6120 S. Dairy Ashford Rd. | E | 1311_VOC (TCLP VOC) |
| | | | | F | 1311_SV (TCLP SVOC) |
| City/State/Zip | Houston, TX 770721010 | City/State/Zip | Houston TX 770721010 | G | RCI |
| Phone | (281) 983-8829 | Phone | (281) 983-8829 | H | 8260_S BTEX |
| Fax | (281) 983-7293 | Fax | (281) 983-7293 | I | Moisture |
| e-Mail Address | ehawkinson@hvj.com | e-Mail Address | ehawkinson@hvj.com | J | 8260 MTBE |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-13 (0-4) | 5/21/20 | 9:00a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 2 | EB-15 (8-12) | 5/21/20 | 9:26a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 3 | EB-15 (8-12) | 5/21/20 | 9:26a | water | | 6 | | | 3 | | | | | | | 3 | |
| 4 | EB-16 (4-8) | 5/21/20 | 9:51a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 5 | EB-17 (4-8) | 5/21/20 | 10:07a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 6 | EB-18 (4-8) | 5/21/20 | 10:26a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 7 | EB-18 (8-12) | 5/21/20 | 10:32a | water | | 6 | | | 3 | | | | | | | 3 | |
| 8 | EB-19 (0-4) | 5/21/20 | 10:51a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 9 | EB-20 (0-4) | 5/21/20 | 11:06a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |
| 10 | EB-23 (8-12) | 5/21/20 | 11:26a | soil | | 6 | 2 | 1 | 2 | | | | | | 1 | | |

Sampler(s) Please Print & Sign: Alexandra Milne

Shipment Method:

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Date: 5/21/20 Time: 15:57 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 5/21/2020 15:57

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: Phase II ESA project

| Cooler ID | Cooler Temp. |
|---|---|
| | |
| | |
| | |

QC Package: (Check One Box Below)

- ☒ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070

# Chain of Custody Form

Page 4 of 4

COC ID: 222064

**HS20050835**

HVJ Associates
Phase II ESA project

| Customer Information | | Project Information | | ALS Project Manager: | |
|---|---|---|---|---|---|
| Purchase Order | | Project Name | Phase II ESA project | A | 8260 (5035/8260 BTEX & MTBE) |
| Work Order | | Project Number | HG20100043 | B | 8260 (TCL 4.3 VOC (5035/8260)) |
| Company Name | HVJ Associates | Bill To Company | HVJ Associates | C | TX1005 (TPH) |
| Send Report To | Ed Hawkinson | Invoice Attn | Ed Hawkinson | D | 1311_METALS_HS (TCLP RCRA 11 Metals) |
| Address | 6120 S. Dairy Ashford Rd. | Address | 6120 S. Dairy Ashford Rd. | E | 1311_VOC (TCLP VOC) |
| | | | | F | 1311_SV (TCLP SVOC) |
| City/State/Zip | Houston, TX 770721010 | City/State/Zip | Houston TX 770721010 | G | RCI |
| Phone | (281) 983-8829 | Phone | (281) 983-8829 | H | 8260_S BTEX |
| Fax | (281) 983-7293 | Fax | (281) 983-7293 | I | Moisture |
| e-Mail Address | ehawkinson@hvj.com | e-Mail Address | ehawkinson@hvj.com | J | 8260 MTBE |

| No. | Sample Description | Date | Time | Matrix | Pres. | # Bottles | A | B | C | D | E | F | G | H | I | J | Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EB-22 (4-8) | 5/21/20 | 11:50a | Soil | | 4 | 2 | 1 | 2 | | | | | | 1 | | |
| 2 | EB-22 (8-12) | 5/21/20 | 11:54a | Wate | | 6 | | | 3 | | | | | | 3 | | |
| 3 | Composite I | 5/21/20 | 12:00p | Soil | | 1 | | [illegible] | | | X | | X | | | | |
| 4 | Composite II | 5/21/20 | 12:00p | Soil | | 1 | | | | X | | X | | | | | |
| 5 | Composite III | 5/21/20 | 12:00p | Soil | | 1 | | | X | | | | | X | | X | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |

Sampler(s) Please Print & Sign: Alexandra Milne

Shipment Method:

Required Turnaround Time: (Check Box) ☐ STD 10 Wk Days ☒ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: [signature] Date: 5/21/20 Time: 15:57

Received by: [signature]

Relinquished by: Date: Time:

Received by (Laboratory): [signature] 5/21/2020 15:57

Logged by (Laboratory): Date: Time:

Checked by (Laboratory):

Notes: Phase II ESA project

| Cooler ID | Cooler Temp. |
|---|---|
| | |
| | |
| | |

QC Package: (Check One Box Below)

- ☒ Level II Std QC
- ☐ Level III Std QC/Raw Date
- ☐ Level IV SW846/CLP
- ☐ Other
- ☐ TRRP Checklist
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-$HNO_3$ 3-$H_2SO_4$ 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

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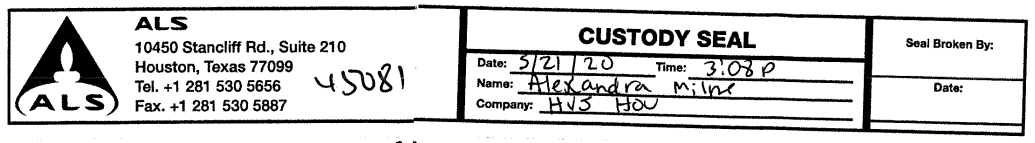


ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

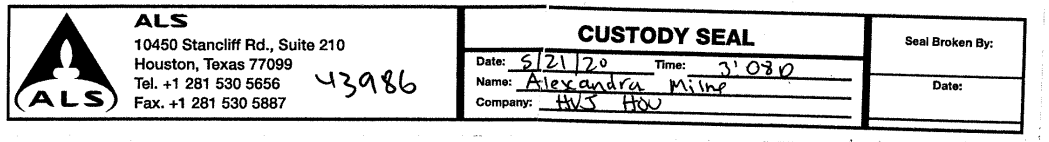
45081

CUSTODY SEAL

Date: 5/21/20 Time: 3:08 P
Name: Alexandra Milne
Company: HVJ HOU

Seal Broken By:
Date:

45081 MAY 21 2020



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

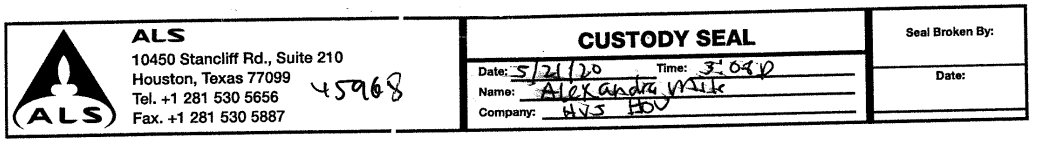
43986

CUSTODY SEAL

Date: 5/21/20 Time: 3:08 P
Name: Alexandra Milne
Company: HVJ HOU

Seal Broken By:
Date:

43986 MAY 21 2020



ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

45968

CUSTODY SEAL

Date: 5/21/20 Time: 3:08 P
Name: Alexandra Milne
Company: HVJ HOU

Seal Broken By:
Date:

45968 MAY 21 2020

# APPENDIX C

# WASTE DISPOSAL DOCUMENTATION

470755-19 3706285

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | CES0G | 1 | (877) 577-2669 | 470755-19 |

**GENERATOR**

5. Generator's Name and Mailing Address

HVJ Associates
6120 South Dairy Ashford
Generator's Phone: Houston TX 77072 (281)983-8875

Generator's Site Address (if different than mailing address)

HVJ Associates S Dairy Ashford
6120 S DAIRY ASHFORD RD
HOUSTON TX 77072-1018

6. Transporter 1 Company Name

STERICYCLE SPECIALTY WASTE SOLUTIONS INC

U.S. EPA ID Number: MNS000110924

7. Transporter 2 Company Name

U.S. EPA ID Number: TXR000084784

8. Designated Facility Name and Site Address

SEABREEZE ENV LANDFILL
10310 FM 523
Facility's Phone: ANGLETON, TX 77515 (979) 864-4442

U.S. EPA ID Number: EXE

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| | 1. NON REGULATED MATERIAL (CLASS II SOIL CUTTINGS) | 001 | DM | 120 | P | CES0 3192 |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

13. Special Handling Instructions and Additional Information

(1) SR19976-00 - IDW SOIL CUTTINGS-CL

14. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name | Signature | Month 09 | Day 04 | Year 19

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Eric Arrellano | Signature | Month 09 | Day 06 | Year 19

Transporter 2 Printed/Typed Name: Robert Ramirez | Signature | Month 9 | Day 16 | Year 19

**DESIGNATED FACILITY**

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Zula Delgado | Signature | Month 9 | Day 25 | Year 19

6-NHM-C-C-11

**5-TRANSPORTER'S COPY**