



**PHASE II
ENVIRONMENTAL SITE ASSESSMENT
RCA EWPP RAW WATER LINE, LLPS DIRECT
AND PRS AT EWPP PROJECT
WBS NO. S-000902-0132-3 AND WBS NO. S-000902-0133-3
HOUSTON, HARRIS COUNTY, TEXAS**

**PREPARED FOR:
LOCKWOOD, ANDREWS & NEWNAM, INC.
2925 BRIARPARK DRIVE, SUITE 400
HOUSTON, TEXAS 77042**

**PREPARED BY:
HVJ ASSOCIATES, INC.
HOUSTON, TEXAS
MARCH 19, 2014**

**REPORT NO. HE1214763
KEY MAP NOS.: 496 U & Y**



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March 19, 2014

Jaipal R. Musku, PE
 Lockwood, Andrews & Newnam, Inc.
 2925 Briarpark Drive, Suite 400
 Houston, Texas 77042

Re: Phase II Environmental Site Assessment (ESA)
 RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project
 WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3
 Owner: City of Houston
 HVJ Project No. HE1214763

Dear Mr. Musku:

Presented herein is our final Phase II Environmental Site Assessment report for the above referenced project. The assessment was performed in general accordance with our Proposal No. HE1214763 dated November 7, 2013 and revised on December 17, 2013; current ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process" as modified by the City of Houston (COH) Public Works and Engineering Infrastructure Design Manual "Geotechnical and Environmental Requirements" (July 2012).

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
 Project Manager

MM/EH/nl

Copies submitted: 4 final

The following lists the pages which complete this report:	
● Main Text – 11 pages	● Appendix B – 7 pages
● Plates – 3 pages	● Appendix C – 45 pages
● Appendix A – 21 pages	● Appendix D – 4 pages

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EXECUTIVE SUMMARY

HVJ Associates, Inc. has completed a Phase II ESA for the assessment of a proposed 84-inch water line interconnection project at the East Water Purification Plant, Low Lift Pump station (LLPS) direct connection and pressure regulating station (PRS) at East Water Purification Plant from Clinton Drive north approximately 4,500 feet to near 19th Street in the Galena Park area of Houston, Texas. We understand that the approximate depth of construction is approximately 18 feet below site grade (bgs).

The purpose of this assessment was to determine if soil and/or groundwater contamination from sites with recognized environmental conditions (RECs) might impact the design and construction of the proposed project. This assessment was performed in general accordance with HVJ Associates Proposal No. HE1214763 dated November 7, 2013 and revised on December 17, 2013 and current ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process" as modified by the City of Houston (COH) Public Works and Engineering Infrastructure Design Manual "Geotechnical and Environmental Requirements" (July 2012).

The available information for this Subject Project Alignment Area and subsurface investigation, conducted during February 2014 are summarized below:

- Six borings were drilled using Geoprobe soil boring equipment at locations with recognized environmental conditions (RECs) along the Subject Project Alignment Area. These borings were drilled on or near the proposed construction locations.
- One soil sample from each boring was obtained for laboratory analysis of chemicals of concern (COCs). One groundwater sample was obtained from boring EB6 for laboratory analysis of chemicals of concern (COCs).
- The subsurface soils consist of clay, sandy clay and fine sand.
- No volatile organic compounds (VOCs) or total petroleum hydrocarbons (TPH) were found above the analytical method reporting limit in soil samples collected along the Subject Project Alignment area.

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 Area will require special handling. Using the City of Houston criteria, no potentially petroleum contaminated areas (PPCAs) were identified along the Subject Project Alignment.

Based on the results of this assessment, we recommend no further soil testing of the REC areas along the Subject Project Alignment Area. 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

The project involves the assessment of an 84-inch water line interconnection at the East Water Purification Plant, LLPS direct connection and PRS at East Water Purification Plant from Clinton Drive north approximately 4,500 feet to near 19th Street in the Galena Park area of Houston, Texas.

Based on the information provided to us by the client, the maximum invert depth of the utilities will not exceed eighteen feet below the existing grade. This assessment was done in accordance with City of Houston, Department of Public Works and Engineering Infrastructure Design Manual Chapter 11 “Geotechnical and Environmental Requirements” and 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 investigation is to determine the nature of possible environmental contamination associated with locations of potential concern and their impact to the design, construction and operation of the proposed facilities. HVJ Associates identified two sites of environmental concern along the project alignment during the preparation of our ESA report HE1214760 “Phase I Environmental Site Assessment, RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project” dated September 30, 2013. The sites that were assessed, type of concern and concern documentation/comment are listed in Table 1 below.

Name and Location of Concern	Chemicals of Concern	Concern Documentation/Comment
Kinder Morgan Terminals (aka GATX Terminals, KM Liquids, etc.) 906 Clinton Drive	Various chemicals/materials including naphtha, gasoline, diesel fuel, slop oil, alkylate, lube oil, sodium sulfide, waste oil, ethylene glycol, jet fuel, MTBE, alkylaromatic, xylene, benzene, univolt, cresols and caustic soda in site soil and groundwater.	This facility is listed in the IHW Corrective Active database with various forms of contamination including VOCs and lead contamination in site groundwater but with no remediation reported. The activity status is listed as “the incident is being studied to determine the extent, composition and/or other properties and circumstances of the contamination.” This facility is also listed with a civil court case record for benzene pollution and a consent instrument with penalty for unspecified violation(s). Several releases have been identified at this facility consisting of a small amount of hydrosulfide and 210 gallons of toluene solvent spilled on the ground from a tanker overfill. Groundwater engineering controls have been established for this facility. Materials spilled at this facility include (but are not limited to) naphtha, gasoline, diesel fuel, slop oil, alkylate, lube oil, sodium sulfide, waste oil, ethylene glycol, jet fuel, MTBE, alkylaromatic, xylene, benzene, univolt, cresols and caustic soda. These materials were reported to have impacted site soil, water and the ship channel. An interviewee indicated that a former Texaco refinery was located west of the Subject Project Alignment between manholes MH-17 and MH-18. Possible groundwater and/or soil contamination at this site may be a concern.
East/West Pipeline Crossings North/South Pipelines Adjoining	VOCs and TPH	East to west trending pipelines cross north of the south end of the Subject Project Alignment along Clinton and near the center of the project alignment. North to south

Table 1 RCA EWPP Water Line Project Environmental Issues		
Name and Location of Concern	Chemicals of Concern	Concern Documentation/Comment
		trending pipelines (some containing crude oil) adjoin the Subject Project Alignment. Although there is no adverse environmental information in the databases and no obvious environmental issues were observed associated with these pipelines during the site reconnaissance these pipelines may be a concern due to the proximity and contents of some of them and the possible risk of petroleum hydrocarbon contamination in site or site area groundwater and/or soil.

The objective of the assessment was to determine the nature of possible environmental contamination associated with the Kinder Morgan Terminals (aka GATX Terminals, KM Liquids, etc.) at 906 Clinton Drive and several pipeline crossings adjoining the Subject Project Alignment Area. It was determined that impacts (if any) to the project could be assessed with six borings. Groundwater was encountered in sufficient quantity for sampling at one boring location.

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. Prepared and submitted for approval City of Houston facility (boring) permit application (see Appendix A).
3. Drilled six borings to 24 feet below ground surface (bgs) or the top of the water table. All borings were installed using Geoprobe equipment.
4. Performed soil sample field screening with an organic vapor meter (OVM) and obtained selected samples for subsequent laboratory analyses.
5. Prepared boring logs (copies of these logs are provided in Appendix B).
6. Submitted selected samples to A&B Laboratory for VOC and TPH analysis. See Table 1 above for boring address and number, type of concern, approximate depth of construction and analysis conducted (laboratory data sheets, QA/QC documentation and chain-of-custody form are provided in Appendix C).
7. Coordinated drill cuttings and related drummed non-hazardous waste disposal. Waste materials were transported to a state approved landfill by an agent of USA Environment. Waste disposal documentation is provided in Appendix D of this report.
8. 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 at the REC locations, 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 investigator 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 Arkansas, Tennessee and Texas. His career encompasses a period exceeding 30 years involving environmental investigations, hydrogeology, water resource evaluations and energy exploration.

2. BACKGROUND INFORMATION

2.1 Results of Previous Environmental Studies

An HVJ Associates Phase I Environmental Site Assessment “RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project” (WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3) dated September 30, 2013 documented two sites of environmental concern along the Subject Project Alignment Area. These sites are the Kinder Morgan Terminals (aka GATX Terminals, KM Liquids, etc.) at 906 Clinton Drive and the East/West Pipeline Crossings near the north end of the project area.

The Subject Project Alignment Area is located within a City of Houston Water Plant which adjoins a heavily industrialized area in the Galena Park area of east Houston. Available information for this project is summarized below:

1. A review of historical data and early topographic maps show that the Subject Project Alignment area was developed prior to 1944.
2. According to the ASTM Standard E 1527-05; regulatory data indicate 59 locatable mapped environmental database entries at multiple sites within the Subject Project Alignment area.
3. After a site reconnaissance and our review of historical data, maps and the Texas Commission on Environmental Quality (TCEQ) online records, we found that two sites adjoining the Subject Project Alignment has recognized environmental conditions (RECs) that could pose a concern to project construction along the Subject Project Alignment.

Numerous pipelines extend through the Subject Project Alignment area. North/south trending pipelines belonging to ExxonMobil Pipeline Company parallel the Subject Project Alignment north of Clinton Drive. Several east/west trending pipelines belonging to ExxonMobil Pipeline Company and Equistar Chemicals cross the Subject Project Alignment south of Hunting Bayou. East/west trending pipelines belonging to Phillips 66 Pipeline LLC, Explorer Pipeline Company and Kinder Morgan Texas Pipeline LLC extend along Clinton Drive and cross near the south end of the Subject Project Alignment near Clinton Drive.

In the Phase I ESA HVJ Associates indicated that “there is a potential for environmental contamination to impact the Subject Project Alignment from two REC locations and we recommend further environmental study of these locations in the form of a Phase II ESA if the proposed construction activities are deeper than five feet below ground surface.” These locations are the Kinder Morgan (GATX) Terminal (this site is listed with various other names including KM Liquids, Enjet, Magellan Pipeline etc.) facility at 906 Clinton Drive near the southwest end of the Subject Project Alignment and several north to south trending crude oil pipelines adjoining and/or crossing the Subject Project Alignment near its north end.

2.2 Planned Construction Description

The project involves the assessment of an 84-inch water line interconnection at the East Water Purification Plant, LLPS direct connection and PRS at East Water Purification Plant from Clinton Drive north approximately 4,500 feet to near 19th Street in the Galena Park area of Houston, Texas. (see Plate 1 for project location).

3. INVESTIGATIVE METHODOLOGY

3.1 Soil Boring Sampling Activities

HVJ Associates performed this Phase II Environmental Site Assessment 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 as modified by the City of Houston Public Works and Engineering Infrastructure Design Manual “Geotechnical and Environmental Requirements” (July 2012). Prior to conducting our on-site investigation, City of Houston 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. A City of Houston Facility Permit was obtained for all boring locations.

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 Total Support Services, Inc. using Geoprobe sampling equipment. At each location, the unit collected four-foot long soil cores from the ground surface to the top of the water bearing zone or to predetermined boring depths based on depth of construction information provided by LAN.

The locations of the soil borings/probes are shown on the Boring Location Map (Plate 2). 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 B).

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 contained in the project proposal. 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 A&B Laboratory for analysis.

3.2 Laboratory Analysis Performed

A&B Laboratory performed the following analyses on selected soil samples from the environmental borings installed along the Subject Project Alignment Area as follows:

- TPH using TCEQ TX Method 1005 (all borings); and
- VOC using EPA Method 8260C (all borings).

Copies of laboratory reports by A&B Laboratory as well as the standard chain-of-custody documentation are included in Appendix C.

3.3 Waste Management

Investigation derived wastes (primarily soil cuttings) were generated in a small amounts during this investigation. 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. These materials were transported for disposal under Republic Services Non-Hazardous Waste Manifest by an agent of USA Environment to a state approved landfill. Copies of the Republic Services Special Waste Profile and manifest documents are provided in Appendix D of this report.

4. ASSESSMENT RESULTS

4.1 Site Specific Soil Conditions

The subsurface soils consist of clay, sandy clay and fine sand. Specific soil descriptions and field observations for the soil borings are included on the boring logs contained in Appendix B. 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/Groundwater

No soil or groundwater samples were found to contain volatiles and TPH at or above the method reporting limit. Using the City of Houston criteria, no potentially PPCAs were identified along the Subject Project Alignment. The City of Houston Guide Specifications 02105 (03-18-2005) Chemical Sampling and Analysis and 02120 (03-18-2005) Transportation and Disposal for construction defines a potentially petroleum contaminated area (PPCA) as “an area within station-to-station locations identified on drawings where petroleum contamination has been detected in soil or groundwater.”

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary and Conclusions

The subsurface soils consist of clay, sandy clay and fine sand. We conclude that no volatiles or TPH are present in soil samples collected from borings EB1 through EB6 (inclusive). We conclude that no volatiles or TPH are present in the groundwater sample collected from boring EB6.

Groundwater was encountered in sufficient quantity for sampling at one location. It should be noted that the groundwater table may fluctuate due to seasonal variations in rainfall and local stratigraphic and/or underground (manmade) features and groundwater be present at the remaining boring locations at other times in the year or at nearby locations. No PPCA locations were identified as part of this Phase II ESA.

5.2 Recommendations

Based on a comparison of analytical results detailed in this report with TCEQ PCLs and other information, we recommend no further environmental studies adjacent to or near the RECs along the Subject Project Alignment Area since no contamination was detected. We recommend no additional worker protection since no volatile compounds or petroleum contaminants at or above the sample analysis method detection level were found in the samples analyzed. We recommend no petroleum resistant piping and gaskets or other petroleum contaminated design considerations for this project. We recommend no petroleum (or other) contamination design considerations at the location detailed above. We recommend no environmental considerations/protocols for the proposed construction.

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 the COH and LAN. 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 the COH and/or LAN, 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 COH and/or LAN reliance, and subject to the same contractual, technological, and other limitations to which COH and LAN has agreed.

The report's findings are based on conditions that existed on the date of HVJ Associates site visit and field investigations 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 other compounds affected soils present at the Subject Project Alignment Area. HVJ Associates has based the conclusions included in this report on its observation of existing Subject Project Alignment Area conditions, its interpretation of site history, its interpretation of the Subject Project Alignment Area 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 Area conditions under no circumstances comprise a warranty that conditions in all areas within the Subject Project Alignment Area (and below existing grade) are of the same quality as the area sampled. Recognize, too, that contamination might exist in forms not indicated by the limited exploration HVJ Associates conducted.

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 COH. The rules, regulations and guidelines by which this investigation was conducted were understood to be current or expected at the time HVJ Associates developed its proposal. Any additional information about these Subject Project Alignment Areas that become 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:

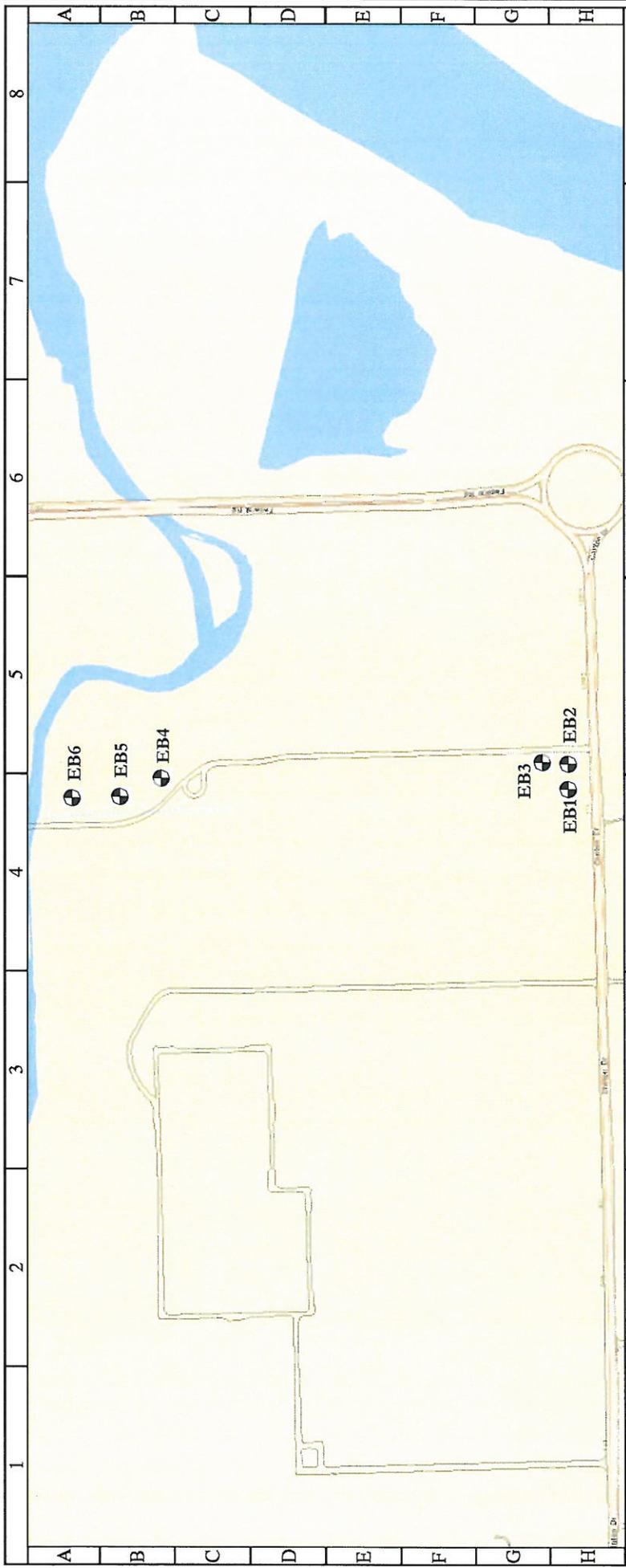
1. Bureau of Economic Geology, 1982. Geologic Atlas of Texas, Houston Sheet, University of Texas at Austin.
2. USDA Soil Conservation Service (Natural Resources Conservation Service), 1976. Soil Survey of Harris County, Texas.
3. ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process."
4. City of Houston, Department of Public Works and Engineering Infrastructure Design Manual Chapter 11 "Geotechnical and Environmental Requirements."
5. ASTM Standard Practice E-1903 - 97 (2002) "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process." "
6. City of Houston Guide Specifications 02105 and 02120.
7. TCEQ TRRP Residential Soil and Groundwater Protective Concentration Limits (PCLs) Tables (June 29, 2012).

8. HVJ Associates Phase I Environmental Site Assessment “RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project” (WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3) dated September 30, 2013 (HVJ Project No. HE1314762).

PLATES

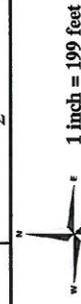


	Drawn:	EII	<p style="text-align: center;">Plate 1 RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3 Houston, Harris County, Texas</p> 
	Checked:	EII	
	Date:	February 2014	
	Scale:	NTS	
Project No.	HE1214763		



CITY OF HOUSTON
 Department of Public Works and Engineering
 Geographic Information & Management System (GIMS)

DISCLAIMER: THIS MAP REPRESENTS THE BEST INFORMATION AVAILABLE TO THE CITY.
 THE CITY DOES NOT WARRANT ITS ACCURACY OR COMPLETENESS.
 FIELD VERIFICATIONS SHOULD BE DONE AS NECESSARY.



LEGEND:

 APPROXIMATE BORING LOCATIONS



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

DATE: 2/11/2014	APPROVED BY: EH	PREPARED BY: NL
PROPOSED PLAN OF BORINGS RCA EWPPP RAW WATER LINE, LLPS DIRECT AND PRS AT EWPPP PROJECT WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3		
PROJECT NO.: HE1214763	DRAWING NO.:	PLATE 2

APPENDIX A
PERMIT DOCUMENTATION

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-01

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,
For the placement or maintenance of:

Environmental test bore

At the following location:

Along Clinton Dr (EB-1) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-02

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,

For the placement or maintenance of:

Environmental test bore

At the following location:

Along Clinton Dr (EB-2) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-03

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,

For the placement or maintenance of:

Environmental test bore

At the following location:

Along Clinton Dr (EB-3) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-04

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,

For the placement or maintenance of:

Environmental test bore

At the following location:

Approx 3000 FT North of Clinton Dr (EB-4) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-05

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,

For the placement or maintenance of:

Environmental test bore

At the following location:

Approx 3000 FT North of Clinton Dr (EB-5) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.

FACILITY PERMIT
ARTICLE XII, CHAPTER 40,
CITY OF HOUSTON CODE OF ORDINANCE

PERMIT NO: CIP-14-01-06

Pursuant to the terms and provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, having been approved and adopted by the City of Houston, Texas; the application made for this permit having been approved; said Facility Permit is hereby issued to:

HVJ, Permittee,
For the placement or maintenance of:

Environmental test bore

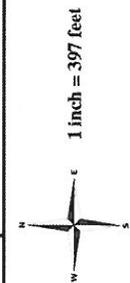
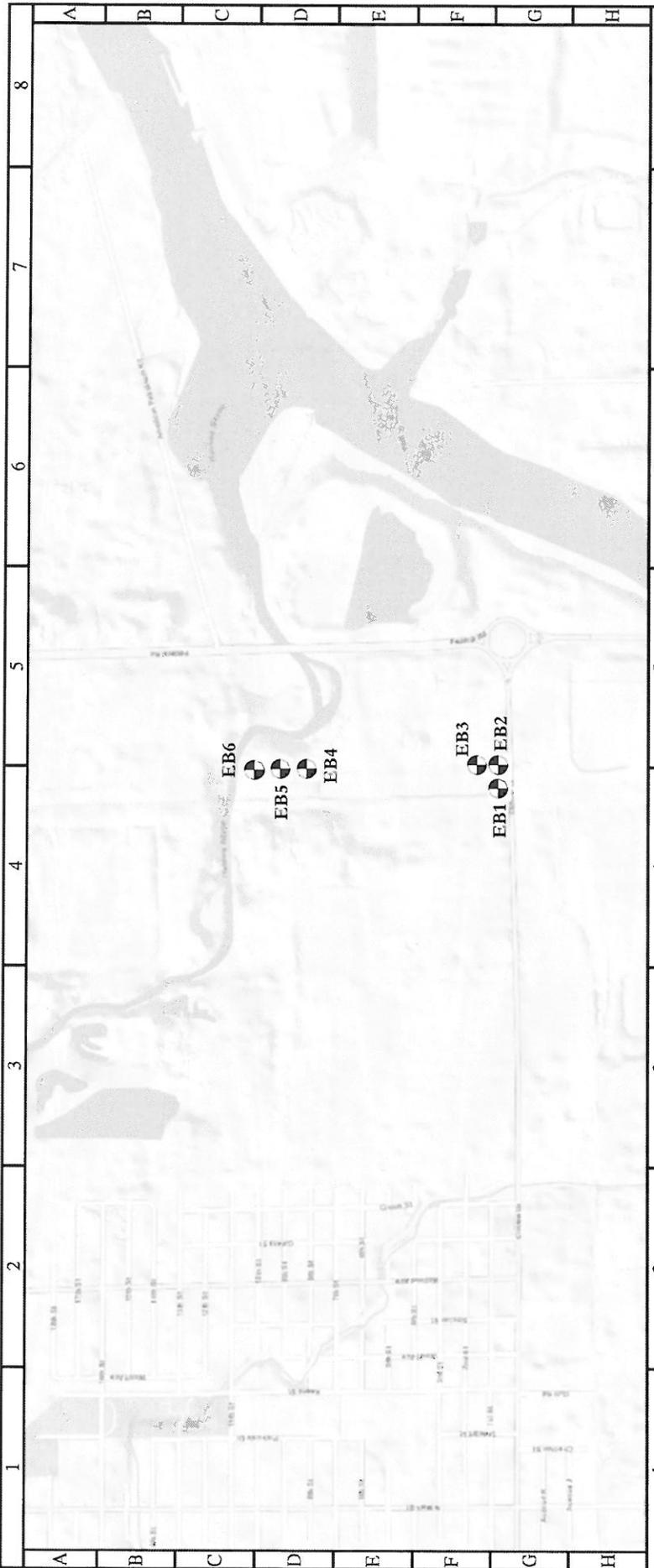
At the following location:

Approx 3000 FT North of Clinton Dr (EB-6) (A Minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained) on the condition that, by acceptance of this permit, Permittee expressly covenants and agrees to comply with each and every term, provision and condition contained in Article XII, Chapter 40, City of Houston Code of Ordinances.

Maher Tanbouz

Maher Tanbouz, P.E., Supervising Engineer
Department of Public Works and Engineering

1. The Permittee shall contact a Utility Coordinating Committee at (713) 223-4567 or (800) 245-4545 minimum of (48) hours prior to construction to have utilities field located.
2. The Permittee shall contact the Traffic Management Branch at (832) 395-3020 for lane closure permits.
3. The Permittee shall be fully responsible for any damages to existing water, wastewater, storm sewer lines and traffic signal conduits. All damages shall be repaired in accordance with City of Houston, Dept. of Public Works and Engineering "Standard Construction Specifications" with latest addenda and amendments thereto, at no cost to the City of Houston.
4. The Permittee shall notify the Inspector at glenn.boggan@houstontx.gov a minimum of (48) hour prior to drilling or plugging to arrange for an inspection.



CITY OF HOUSTON
 Department of Public Works and Engineering
 Geographic Information & Management System (GIMS)

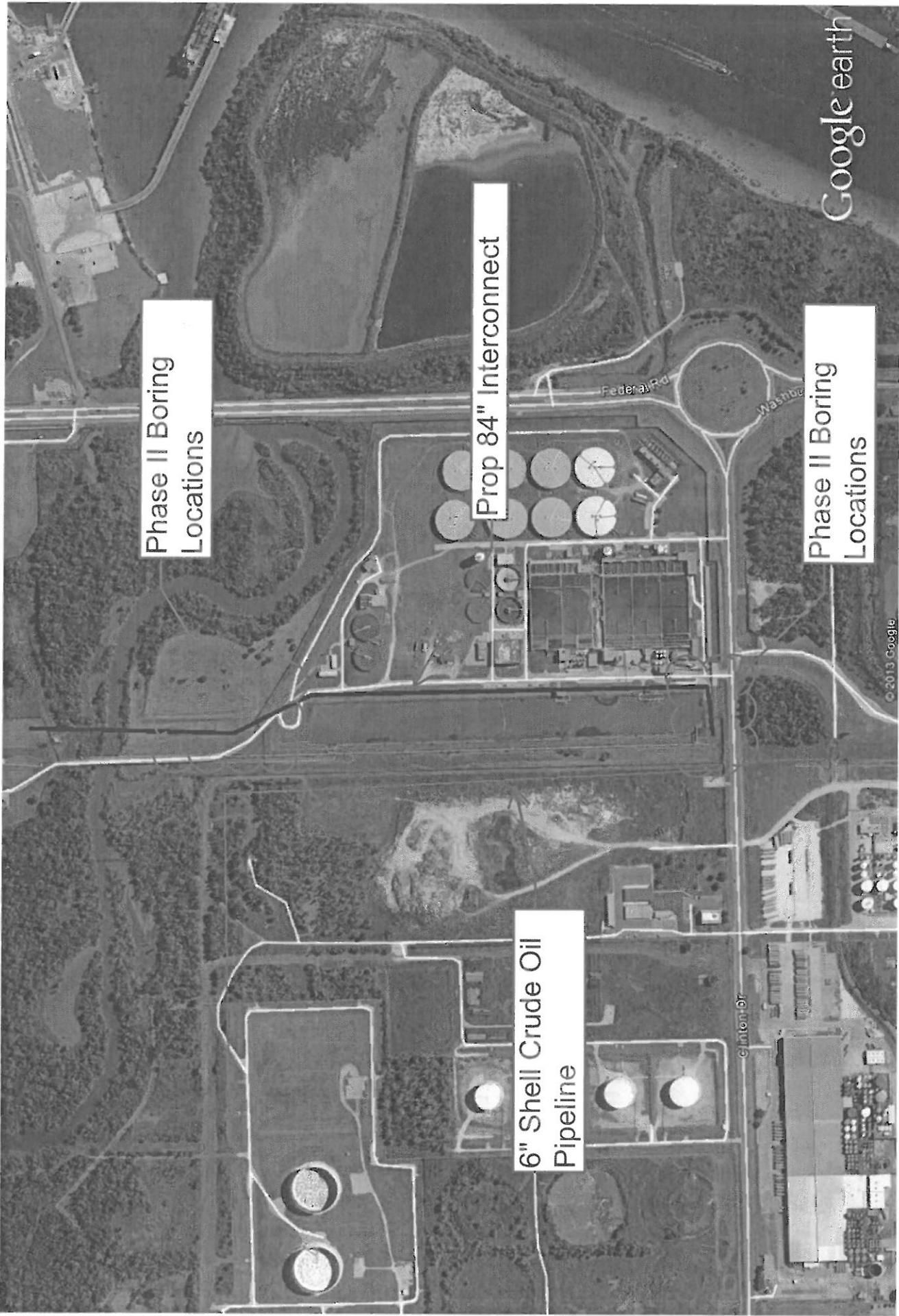
DISCLAIMER: THIS MAP REPRESENTS THE BEST INFORMATION AVAILABLE TO THE CITY.
 THE CITY DOES NOT WARRANT ITS ACCURACY OR COMPLETENESS.
 FIELD VERIFICATIONS SHOULD BE DONE AS NECESSARY.



LEGEND:

 APPROXIMATE BORING LOCATIONS

		6120 S. Dairy Ashford Road Houston, Texas 77072-1010 281 933 7388 Ph 281 933 7293 Fax	
DATE: 1/22/2014	APPROVED BY: EH	PREPARED BY: NL	
PROPOSED PLAN OF BORINGS RCA EWPP RAW WATER LINE, LLPS DIRECT AND PRS AT EWP PROJECT			
PROJECT NO.:	HE1214763	DRAWING NO.:	PLATE 1



Google earth

feet
meters

3000
900





Houston	6120 S. Dairy Ashford Rd.
Austin	Houston, TX 77072-1010
Dallas	281.933.7388 Ph
San Antonio	281.933.7293 Fax
	www.hvj.com

January 22, 2014

Mr. Tuan Nguyen
City of Houston Department of Public Works & Engineering
611 Walker, 14th Floor
Houston, Texas 77002

Re: Phase II Environmental Site Assessment (ESA)
RCA EWPP Raw Water Line, LLPS Direct and PRS at EWPP Project
WBS No. S-000902-0132-3 and WBS No. S-000902-0133-3
Owner: City of Houston
HVJ Proposal No. HE1214763

Dear Mr. Nguyen:

Please find attached an "Application for Monitoring Well/Boring Permit" for environmental borings we propose to install within the City of Houston (COH) right of way in 2 various locations in Houston areas. The proposed boring locations are annotated on the attached GIMS maps.

We understand that because this is a COH project there will be no permit costs for the permit we are requesting. If you have any questions or require additional information, please contact Edward Hawkinson at 281.804.5766 or Niem Ly at 281.983.8825.

Sincerely,

HVJ ASSOCIATES, INC.

Texas Firm Registration No. F-000646

A handwritten signature in black ink, appearing to read 'Edward Hawkinson', is written over a horizontal line.

Edward Hawkinson, PG
Project Manager

Attachments

NL:eh



CITY OF HOUSTON, TEXAS
Public Works & Engineering Department



**Application for
Monitoring Well/Boring Permit**

ARTICLE XII, CHAPTER 40, CITY OF HOUSTON CODE OF ORDINANCES
ALL PERMITS SHALL BE EFFECTIVE ONE (1) YEAR FROM DATE OF ISSUANCE

I: APPLICANT INFORMATION

Today's Date : January 22, 2014

Permit Status: Are you obtaining this permit for a City project? Yes No

If yes, what is the CIP/GFS number of this project? WBS No. S-000902-01329-3

Who is the City's Project Manager for this project? Arthur Morris at 832-395-2317

Is this a renewal application? Yes No

Applicant: Name of Owner/Operator: HVJ Associates, Inc.

Telephone Number: 281.983.8829 Fax: 281.933.7293

Street Address: 6120 S. Dairy Ashford Road

Houston, Texas 77072-1010

E-mail Address (If applicable): ehawkinson@hvj.com

If the applicant is a corporation, partnership, or association, then the applicant shall provide evidence of its existence, of its authority to maintain the facility, and of the authority of the person signing the application to act on behalf of the entity.

Person authorized to file application: Name: Edward F. Hawkinson Title: Project Manager

Phone Number: 281.804.5766

E-mail Address (If applicable): ehawkinson@hvj.com

Type of Business Entity: Corporation
(i.e. corporation, partnership, association, sole proprietorship). Organization documents of business entity should be attached. (certificate of incorporation, assumed name certificate, etc.)

Corporate Registered Agent (If applicable): Name: Herbert V. Johnson Title: President

Address: 6120 S. Dairy Ashford Rd., Houston, TX 77072

Phone Number: 281.933.7388

E-mail Address (If applicable): hjohnson@hvj.com



CITY OF HOUSTON, TEXAS
Public Works & Engineering Department



**Application for
Monitoring Well/Boring Permit**

Emergency Contact Information:
List two(2) persons

Name:	Edward F. Hawkinson	Mobile Telephone:	281.804.5766
Business Address:	6120 S. Dairy Ashford Rd., Houston, TX 77072-1010	Business Telephone:	281.983.8829
Home Address:	1415 Welch Street, Houston, TX 77006	Home Telephone:	713.520.1116
Name:	Hossam Esmail	Mobile Telephone:	281.415.7723
Business Address:	6120 S. Dairy Ashford Rd., Houston, TX 77072-1010	Business Telephone:	281.933.7388
Home Address:	22535 Holly Lake Drive, Katy, TX 77450	Home Telephone:	281.395.9762

Agents, Contractors, Engineers:

List every agent, contractor, or engineer that will perform work in the installation, monitoring and removal of the facility. (Additional information may be attached). A copy of the Driller's State license for drilling monitoring well facilities must also be attached.

Name:	Total Support Services, Inc. (tentative - reserve the right to employ an alternate driller)	Telephone:	800.259.7174
Address:	P.O. Box 81621 Austin, TX 78708		

Work Performed: boring installation using Geoprobe

Name: _____ Telephone: _____

Address: _____

Work Performed: _____

II: MONITORING WELL / BORING INFORMATION

Applying for multiple facilities? Yes No

(Identify the type of each facility.)

Number of Facilities: 2 (estimate) Monitoring Well or other Device(s)
4 Environmental Test Boring(s)
6 TOTAL



CITY OF HOUSTON, TEXAS
Public Works & Engineering Department



**Application for
Monitoring Well/Boring Permit**

Detailed Facility
Location Description:

SEE ATTACHED LIST AND MAPS

Attach additional
descriptions for multiple
locations if necessary.

Key _____
Map: 496 U & Y
Location on GIMS map must be attached

There must be minimum of 10 feet between the facility and any existing sanitary sewer lines and a minimum of 5 feet between the facility and any existing water and storm lines and traffic signal conduits shall be maintained

Attach plan(s) showing design, dimension and depth of the facility, the manner in which it will be placed, and the process that will be used for its removal and closure. (Information is required for both monitoring wells and borings)

Registered
Engineer/Surveyor:

Lockwood, Andrews & Newnam, Inc.

Address: 2925 Briarpark Drive, Suite 400
Houston, Texas 77042

Telephone: 713-266-6900

Plan Number: _____

III. PERMIT INFORMATION

NOTE: ALL PERMIT FEES ARE WAIVED FOR THOSE APPLICANTS APPLYING FOR A PERMIT FOR A CITY PROJECT.

PERMIT TYPE	APPLICATION FEES	CALCULATIONS
ORIGINAL	\$ 200* (1 st facility) + \$25* (each additional facility if applicable) →	\$ _____
RENEWAL	\$25* for each facility →	\$ _____
	\$5* Administrative fee to process <u>all</u> applications →	\$ <u>5.00</u>

TOTAL FEE: \$ 0 (City Project)

Make a Certified or Cashier's Check payable to "City of Houston."

*** ALL FEES ARE NON-REFUNDABLE**

IV. INSURANCE AND BOND INFORMATION

NO PERMIT WILL BE ISSUED WITHOUT AN INSURANCE AND BOND CERTIFICATE

Restoration Bond No.

(Original Bond Attached): N/A

Restoration Bond Sum: N/A

Bond Surety Name: _____

Telephone: _____

Address: _____

Contact Person: _____

E-mail Address(If applicable): _____



CITY OF HOUSTON, TEXAS
Public Works & Engineering Department



Application for
Monitoring Well/Boring Permit

Liability Insurance
Policy No:

BINDERPACP5C022213 - (EFFECTIVE FROM 12/01/2013 to 12/1/2014)

Bodily injury \$300,000.00 per occurrence, property damage \$100,000.00 per occurrence.

Insurer:

USI Southwest

Contact

Person: Rinny Chadwick Telephone: 713.490.4600

Address: 840 Gessner, Suite 600

Houston, Texas 77024

E-mail Address

(If applicable): [rinny.chadwick@usi.biz]

V. ACKNOWLEDGMENT & AFFIDAVIT:

The undersigned Applicant acknowledges, and agrees to observe all provisions of Article XII, Chapter 40, City of Houston Code of Ordinances, with all subsequent revisions, that are applicable to the work herein described and will perform work in accordance with the above plans and specifications. Applicant further swears under penalty of law that the information provided herein is true and correct to the best of Applicant's knowledge.

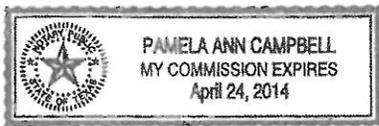
Applicant: HVJ Associates, Inc.

Agent Name: Ziad AlAawar Title Project Manager

Agent Signature:

SWORN AND SUBSCRIBED before me the undersigned authority by the above named person on this

22nd day of January, 2014



Pamela A Campbell

Notary Public in and for the State of Texas

Pamela A. Campbell

(Print Name)

My Commission Expires: 4-24-2014

PERMIT APPROVED:
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS & ENGINEERING

Director

THE STATE OF TEXAS



THIS IS TO CERTIFY THAT

THOMAS E. MATHERS

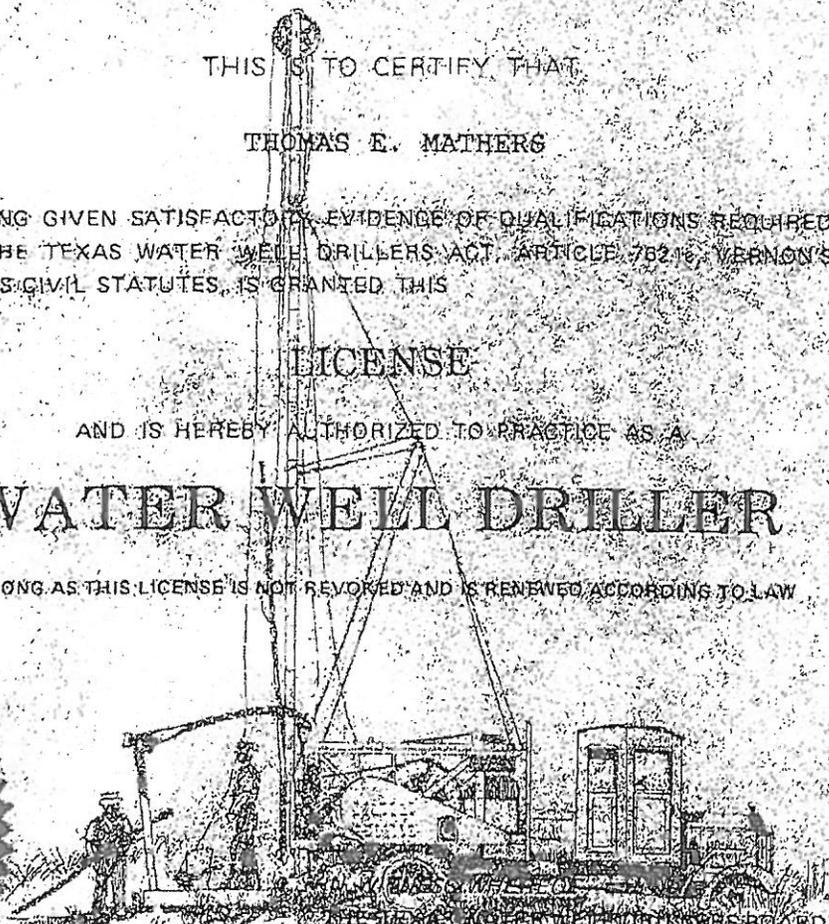
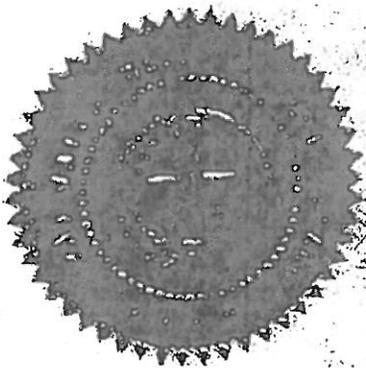
HAVING GIVEN SATISFACTORY EVIDENCE OF QUALIFICATIONS REQUIRED BY THE TEXAS WATER WELL DRILLERS ACT, ARTICLE 7021E, VERNON'S TEXAS CIVIL STATUTES, IS GRANTED THIS

LICENSE

AND IS HEREBY AUTHORIZED TO PRACTICE AS A

WATER WELL DRILLER

SO LONG AS THIS LICENSE IS NOT REVOKED AND IS RENEWED ACCORDING TO LAW



THE TEXAS WATER WELL DRILLERS BOARD HAS AFFIXED ITS HAND AND THE SEAL OF THE BOARD THIS 22ND DAY OF JAN., 1990

LICENSE NUMBER

3096W

BY

[Handwritten Signature]
Chairman



The State of Texas

Secretary of State

CERTIFICATE OF AMENDMENT

FOR

MYJ ASSOCIATES, INC.
CHARTER NUMBER 00751720

THE UNDERSIGNED, AS SECRETARY OF STATE OF THE STATE OF TEXAS,
HEREBY CERTIFIES THAT THE ATTACHED ARTICLES OF AMENDMENT FOR THE ABOVE
NAMED ENTITY HAVE BEEN RECEIVED IN THIS OFFICE AND ARE FOUND TO
CONFORM TO LAW.

ACCORDINGLY THE UNDERSIGNED, AS SECRETARY OF STATE, AND BY VIRTUE
OF THE AUTHORITY VESTED IN THE SECRETARY BY LAW, HEREBY ISSUES THIS
CERTIFICATE OF AMENDMENT.

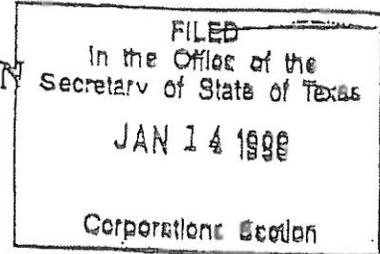
DATED JAN. 14, 1979

EFFECTIVE JAN. 14, 1979




Secretary of State

ARTICLES OF AMENDMENT
TO
THE ARTICLES OF INCORPORATION
OF
EVJ ASSOCIATES, INC.



Pursuant to applicable provisions of the Texas Business Corporation Act and the Bylaws of EVJ Associates, Inc. (the "Corporation"), the Corporation hereby adopts the following Articles of Amendment to the Articles of Incorporation:

ARTICLE I

The name of the Corporation is EVJ Associates, Inc.

ARTICLE II

The Amendment to the Articles of Incorporation of the Corporation changes Article Four of the original Articles of Incorporation, and the full text of such amended Article Four is as follows:

"ARTICLE FOUR

Amount of Capital Stock

The total number of shares into which the authorizing capital stock of the Corporation is divided is one-hundred thousand (100,000) shares, consisting of one-hundred thousand (100,000) shares of no par value.

ARTICLE III

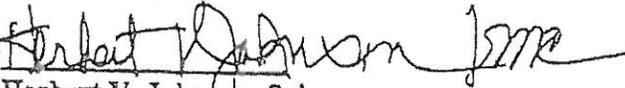
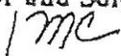
The Amendment to the Articles of Incorporation of the Corporation was adopted by a Unanimous Consent Resolution in lieu of a Special Meeting of Shareholders, said resolution having been adopted on January 4, 1999, by written consent of all shareholders in accordance with Article 9.10 of the Texas Business Corporation Act, and any written notice required by such article has been given.

ARTICLE IV

The number of shares of the Corporation outstanding and entitled to vote at a meeting of shareholders or by resolution are nine-thousand (9,000) shares consisting of no par value. There are no shares of the Corporation entitled to vote by class or series

Dated: January 12, 1999

HVJ Associates, Inc.

By: 
Herbert V. Johnson, Sole
Director and Sole Share-
holder / 

 **Texas Department of Licensing and Regulation**
The umbrella licensing agency of the State of Texas
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Texas Department of Licensing and Regulation
 Result Listing

Name and Location	Other Information
SPAUST, RYAN 4647 BRASS WAY DALLAS TX 75236 County: DALLAS	Water Well Driller and Pump Installer Apprentice License #: 57817 Expiration Date: 08/11/2010 Type: N/A Phone: (972) 243-7174

Driller Designations:

- (W) - water well;
- (M) - monitoring well;
- (C) - closed loop geothermal well;
- (N) - injection well;
- (D) - dewatering well;
- (A) - master well driller which includes all designations previously listed.

Pump Installer Designations:

- (L) - windmills, hand pumps, and pump jacks;
- (P) - single phase pumps;
- (K) - three phase pumps;
- (T) - line-shaft turbine pumps;
- (K) - three phase pumps;
- (I) - master water well pump installer which includes all designations previously listed.

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STATEMENT REGARDING THE REQUIREMENT TO “Attach plan(s) showing design, dimension and depth of the facility, the manner in which it will be placed, and the process that will be used for its removal and closure.”

Six boring will be installed to assess two locations with recognized environmental concerns (RECs). This location of concern, type of concern and other information is shown in the following table:

Location of Concern	Type of Concern	Max. Depth of Construction (ft.)	Recommended Analysis
Kinder Morgan Terminals (aka GATX Terminals, KM Liquids, etc.) 906 Clinton Drive	Various chemicals/materials including naphtha, gasoline, diesel fuel, slop oil, alkylate, lube oil, sodium sulfide, waste oil, ethylene glycol, jet fuel, MTBE, alkylaromatic, xylene, benzene, univolt, cresols and caustic soda in site soil and groundwater.	18	VOC, TPH
East/West Pipeline Crossings North/South Pipelines Adjoining	VOC, TPH	18	VOC, TPH

The objective of the investigation is to determine the nature of possible environmental contamination associated with the industrial sites and their impact to the design, construction and operation of the proposed facilities. It has been determined that none of the proposed locations may require pavement cores. The borings will be advanced using direct push (Geoprobe) techniques and will be continuously sampled from the surface to the boring total depth below ground surface (bgs). Soil samples will be screened for evidence of impacts in the field using an organic vapor meter (OVM). In accordance with City of Houston guidelines, one soil sample will be collected from each boring and submitted for laboratory analysis. Should groundwater be encountered, a temporary monitoring well will be installed and water sampled for laboratory analysis. No more than one monitoring well will be installed at each location. Subsequent to the drilling and sampling activities (the same day or the next day), the temporary monitoring well screen and riser pipe will be removed and each borehole will be plugged from boring total depth to the surface using excess soil cuttings/bentonite slurry and the surface repaired with either topsoil, asphalt patch or concrete as appropriate.

APPENDIX B
BORING LOGS



HVJ Associates Inc.

Telephone:
Fax:

Client: LAN		Job No.: HE1214763		Boring/Well: EB4	
Project: RCA EWPP WATER LINE PROJECT			Well Construction Data		
Date Started: 1/29/14	Date Completed: 1/29/14	Screen:		From: - To:	
Logged By: NIEM	Checked By: EFH	Pack:		From: - To:	
Drilling Co.: Total Support Services	Driller: Chester	Seal:		From: - To:	
Method: Geoprobe	Equipment:	Grout:		From: - To:	
Boring Depth: 24.0	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				0.0		Brown sandy clay with sand seams - possible fill	NO HYDROCARBON ODOR	0
5				0.0		Dark gray sandy clay	NO HYDROCARBON ODOR	5
10				0.0		Reddish brown clay	NO HYDROCARBON ODOR	10
15				0.0			NO HYDROCARBON ODOR	15
20				0.0		Fine sand	NO HYDROCARBON ODOR	20
				0.0			BORING TERMINATED AT 24 FT. BGS	

LAEWNL03 RCA EWPP WL.GPJ LAEWNL03.GDT 2/14/14

APPENDIX C

ANALYTICAL LAB REPORT/CHAIN OF CUSTODY DOCUMENTATION

Laboratory Analysis Report

Total Number of Pages: 44

Job ID : 14011206



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

Client Project Name :
HE1214763 / EWPP Raw Water Line

Report To : Client Name: HVJ Associates P.O.#.: 14-0064H
Attn: Niem Ly Sample Collected By: Niem Ly
Client Address: 6120 S. Dairy Ashford Date Collected: 01/29/14
City, State, Zip: Houston, Texas, 77072

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

Client Sample ID	Matrix	A&B Sample ID
EB 6 (12-13')	Soil	14011206.01
EB 6	Water	14011206.02
EB 5 (15-16')	Soil	14011206.03
EB 4 (22-23')	Soil	14011206.04
EB 1 (17-18')	Soil	14011206.05
EB 2 (7-8')	Soil	14011206.06
EB 3 (22-23)	Soil	14011206.07

Shantall Carpenter

Released By: Shantall Carpenter
Title: Senior Project Manager
Date: 2/7/2014



This Laboratory is NELAP (T104704213-13-8) accredited. Effective: 04/01/2013; Expires: 03/31/2014
Scope: Non-Potable Water, Drinking Water, Air, Solid, Hazardous Waste

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

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Soil samples are reported on a wet weight basis unless otherwise noted. Uncertainty estimates are available on request.

Date Received : 01/29/2014 15:33



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6 (12-13')
 A&B Job Sample ID: 14011206.01

Date: 2/7/2014

Client Name: HVJ Associates Attn: Niem Ly
 Project Name: HE1214763 / EWPP Raw Water Line

Test Description:	% Moisture	Sample Matrix	Soil
Analytical Method:	SM 2540G	Date Collected	01/29/2014 10:15
QC Batch ID:	Qb14013056	Date Received	01/29/2014 15:33
Prep Method:	SM 2540G	Date Prepared	01/30/2014 14:00
Prepared By:	MMaldonado		
Prep Batch ID	PB14013028		
Analyst Initial	MAM	% Moisture	21.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
	% Moisture ¹	21.6				----	----	%	1	01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6 (12-13')
A&B Job Sample ID: 14011206.01

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: Volatile Organic Compounds
Analytical Method: SW-846 8260C
QC Batch ID: Qb14020103
Prep Method: SW-846 5035A
Prepared By: BPCastro
Prep Batch ID: PB14020101
Analyst Initial: BPC
Sample Matrix: Soil
Date Collected: 01/29/2014 10:15
Date Received: 01/29/2014 15:33
Date Prepared: 01/31/2014 10:00
% Moisture: 21.6

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Rows list various chemical compounds and their test results.

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6 (12-13')
 A&B Job Sample ID: 14011206.01

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 10:15
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	21.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
75-71-8	Dichlorodifluoromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
100-41-4	Ethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
98-82-8	Isopropylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
108-38-3&106-4	m- & p-Xylenes	< 0.006	U	0.006	0.0045	0.01	0.1	mg/Kg	0.97	01/31/14 21:16
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
75-09-2	Methylene chloride	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
91-20-3	Naphthalene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
95-47-6	o-Xylene	< 0.002	U	0.002	0.0020	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
100-42-5	Styrene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
127-18-4	Tetrachloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
156-60-5	trans-1,2-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
75-01-4	Vinyl Chloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.97	01/31/14 21:16
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	0.97	01/31/14 21:16
17060-07-0	1,2-Dichloroethane-d4(surr)	97.8				70	130	%	0.97	01/31/14 21:16
1868-53-7	Dibromofluoromethane(surr)	102				70	130	%	0.97	01/31/14 21:16
2037-26-5	Toluene-d8(surr)	106				70	130	%	0.97	01/31/14 21:16
460-00-4	p-Bromofluorobenzene(surr)	123				70	130	%	0.97	01/31/14 21:16

Soil results reported on dry weight basis



LABORATORY TEST RESULTS---TRRP 13

Client Sample ID: EB 6 (12-13')
 A&B Job Sample ID: 14011206.01

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 10:15
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	21.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 30.2	Q18,U	30.2	23.7	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-2	>C12-C28 ¹	< 25.9	U	25.9	20.3	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-4	>C28-C35 ¹	< 22.6	U	22.6	17.7	25	1000	mg/Kg	1	01/30/14 17:41
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 17:41
111-85-3	1-Chlorooctane(surr)	96.8				60	143	%	1	01/30/14 17:41
3386-33-2	Chlorooctadecane(surr)	111				60	150	%	1	01/30/14 17:41

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6
A&B Job Sample ID: 14011206.02

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: Volatile Organic Compounds
Analytical Method: SW-846 8260C
QC Batch ID: Qb14013107
Prep Method: SW-846 5030C
Prepared By: BPcastro
Prep Batch ID: PB14013114
Analyst Initial: BPC
Sample Matrix: Water
Date Collected: 01/29/2014 10:25
Date Received: 01/29/2014 15:33
Date Prepared: 01/30/2014 12:00
% Moisture

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Rows list various chemical compounds and their detection results.

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6
 A&B Job Sample ID: 14011206.02

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Water
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 10:25
QC Batch ID:	Qb14013107	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5030C	Date Prepared	01/30/2014 12:00
Prepared By:	BPcastro		
Prep Batch ID	PB14013114		
Analyst Initial	BPC	% Moisture	

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
74-95-3	Dibromomethane	< 0.003	U	0.003	0.003	0.005	0.05	mg/L	1	01/30/14 15:55
75-71-8	Dichlorodifluoromethane	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
100-41-4	Ethylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
98-82-8	Isopropylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
108-38-3&106-4	m- & p-Xylenes	< 0.002	U	0.002	0.002	0.01	0.1	mg/L	1	01/30/14 15:55
78-93-3	MEK	< 0.002	U	0.002	0.002	0.005	0.05	mg/L	1	01/30/14 15:55
75-09-2	Methylene chloride	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
91-20-3	Naphthalene	< 0.002	U	0.002	0.002	0.005	0.05	mg/L	1	01/30/14 15:55
104-51-8	n-Butylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
103-65-1	n-Propylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
95-47-6	o-Xylene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
135-98-8	sec-Butylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
100-42-5	Styrene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
98-06-6	t-butylbenzene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
127-18-4	Tetrachloroethylene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
108-88-3	Toluene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
156-60-5	trans-1,2-Dichloroethylene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
10061-02-6	trans-1,3-Dichloropropene	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.003	0.005	0.05	mg/L	1	01/30/14 15:55
75-69-4	Trichlorofluoromethane	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
75-01-4	Vinyl Chloride	< 0.001	U	0.001	0.001	0.005	0.05	mg/L	1	01/30/14 15:55
1330-20-7	Xylenes	< 0.003	U	0.003	0.003	0.015	0.15	mg/L	1	01/30/14 15:55
17060-07-0	1,2-Dichloroethane-d4(surr)	101				70	130	%	1	01/30/14 15:55
1868-53-7	Dibromofluoromethane(surr)	93.4				70	130	%	1	01/30/14 15:55
2037-26-5	Toluene-d8(surr)	94.9				70	130	%	1	01/30/14 15:55
460-00-4	p-Bromofluorobenzene(surr)	108				70	130	%	1	01/30/14 15:55

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 6
 A&B Job Sample ID: 14011206.02

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:		Sample Matrix	Water
Analytical Method:	TX 1005	Date Collected	01/29/2014 10:25
QC Batch ID:	Qb14020412	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/29/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14020408		
Analyst Initial	AVB	% Moisture	

CAS Number	Parameter	Result	Flag	SDL	MDL	MLQ	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 0.585	U	0.585	0.66	1.5	60	mg/L	0.886	01/30/14 11:14
TPH-1005-2	>C12-C28 ¹	< 0.762	U	0.762	0.86	1.5	60	mg/L	0.886	01/30/14 11:14
TPH-1005-4	>C28-C35 ¹	< 0.665	U	0.665	0.75	1.5	60	mg/L	0.886	01/30/14 11:14
	Total C6-C35	<				----	----	mg/L	0.886	01/30/14 11:14
111-85-3	1-Chlorooctane(surr)	106				59	122	%	0.886	01/30/14 11:14
3386-33-2	Chlorooctadecane(surr)	109				48	123	%	0.886	01/30/14 11:14

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 5 (15-16')
A&B Job Sample ID: 14011206.03

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: % Moisture
Analytical Method: SM 2540G
QC Batch ID: Qb14013056
Prep Method: SM 2540G
Prepared By: MMaldonado
Prep Batch ID: PB14013028
Analyst Initial: MAM
Sample Matrix: Soil
Date Collected: 01/29/2014 11:00
Date Received: 01/29/2014 15:33
Date Prepared: 01/30/2014 14:00
% Moisture: 12.9

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Row 1: % Moisture1, 12.9, ----, ----, %, 1, 01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 5 (15-16')
 A&B Job Sample ID: 14011206.03

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 11:00
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	12.9

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
630-20-6	1,1,1,2-Tetrachloroethane	< 0.003	Q18,U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
71-55-6	1,1,1-Trichloroethane	< 0.003	U	0.003	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
79-34-5	1,1,2,2-Tetrachloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
79-00-5	1,1,2-Trichloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-34-3	1,1-Dichloroethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-35-4	1,1-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
563-58-6	1,1-Dichloropropene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
87-61-6	1,2,3-trichlorobenzene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
96-18-4	1,2,3-Trichloropropane	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
120-82-1	1,2,4-Trichlorobenzene	< 0.003	U	0.003	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
95-63-6	1,2,4-Trimethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
96-12-8	1,2-Dibromo-3-chloropropane	< 0.005	U	0.005	0.0045	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
106-93-4	1,2-Dibromoethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
95-50-1	1,2-Dichlorobenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
107-06-2	1,2-Dichloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
78-87-5	1,2-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
108-67-8	1,3,5-Trimethylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
541-73-1	1,3-Dichlorobenzene	< 0.003	U	0.003	0.0027	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
142-28-9	1,3-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
106-46-7	1,4-Dichlorobenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
594-20-7	2,2-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
95-49-8	2-Chlorotoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
106-43-4	4-Chlorotoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
99-87-6	4-Isopropyltoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
71-43-2	Benzene	< 0.003	U	0.003	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
108-86-1	Bromobenzene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
74-97-5	Bromochloromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-27-4	Bromodichloromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-25-2	Bromoform	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
74-83-9	Bromomethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
56-23-5	Carbon tetrachloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
108-90-7	Chlorobenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-00-3	Chloroethane	< 0.002	U,V6	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
67-66-3	Chloroform	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
74-87-3	Chloromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
156-59-2	cis-1,2-Dichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
10061-01-5	cis-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 5 (15-16')
 A&B Job Sample ID: 14011206.03

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 11:00
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	12.9

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.003	U	0.003	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-71-8	Dichlorodifluoromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
100-41-4	Ethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
98-82-8	Isopropylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
108-38-3&106-4	m- & p-Xylenes	< 0.005	U	0.005	0.0045	0.01	0.1	mg/Kg	1.01	01/31/14 21:45
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-09-2	Methylene chloride	< 0.003	U	0.003	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
91-20-3	Naphthalene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
95-47-6	o-Xylene	< 0.002	U	0.002	0.0020	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
100-42-5	Styrene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
127-18-4	Tetrachloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
156-60-5	trans-1,2-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
75-01-4	Vinyl Chloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 21:45
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	1.01	01/31/14 21:45
17060-07-0	1,2-Dichloroethane-d4(surr)	97				70	130	%	1.01	01/31/14 21:45
1868-53-7	Dibromofluoromethane(surr)	102				70	130	%	1.01	01/31/14 21:45
2037-26-5	Toluene-d8(surr)	106				70	130	%	1.01	01/31/14 21:45
460-00-4	p-Bromofluorobenzene(surr)	121				70	130	%	1.01	01/31/14 21:45

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 5 (15-16')
 A&B Job Sample ID: 14011206.03

Date: 2/7/2014

Client Name: HVJ Associates Attn: Niem Ly
 Project Name: HE1214763 / EWPP Raw Water Line

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 11:00
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	12.9

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 27.2	Q18,U	27.2	23.7	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-2	>C12-C28 ¹	< 23.3	U	23.3	20.3	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-4	>C28-C35 ¹	< 20.3	U	20.3	17.7	25	1000	mg/Kg	1	01/30/14 17:41
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 17:41
111-85-3	1-Chlorooctane(surr)	114				60	143	%	1	01/30/14 17:41
3386-33-2	Chlorooctadecane(surr)	115				60	150	%	1	01/30/14 17:41

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 4 (22-23')
 A&B Job Sample ID: 14011206.04

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	% Moisture	Sample Matrix	Soil
Analytical Method:	SM 2540G	Date Collected	01/29/2014 11:30
QC Batch ID:	Qb14013056	Date Received	01/29/2014 15:33
Prep Method:	SM 2540G	Date Prepared	01/30/2014 14:00
Prepared By:	MMaldonado		
Prep Batch ID	PB14013028		
Analyst Initial	MAM	% Moisture	17.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MLQ	UQL	Units	DF	Date/Time
	% Moisture ¹	17.6				----	----	%	1	01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 4 (22-23')
A&B Job Sample ID: 14011206.04

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: Volatile Organic Compounds
Analytical Method: SW-846 8260C
QC Batch ID: Qb14020103
Prep Method: SW-846 5035A
Prepared By: BPcastro
Prep Batch ID: PB14020101
Analyst Initial: BPC
Sample Matrix: Soil
Date Collected: 01/29/2014 11:30
Date Received: 01/29/2014 15:33
Date Prepared: 01/31/2014 10:00
% Moisture: 17.6

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Rows list various chemical compounds and their test results.

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 4 (22-23')
 A&B Job Sample ID: 14011206.04

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 11:30
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	17.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
75-71-8	Dichlorodifluoromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
100-41-4	Ethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
98-82-8	Isopropylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
108-38-3&106-4	m- & p-Xylenes	< 0.005	U	0.005	0.0045	0.01	0.1	mg/Kg	0.99	01/31/14 22:13
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
75-09-2	Methylene chloride	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
91-20-3	Naphthalene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
95-47-6	o-Xylene	< 0.002	U	0.002	0.0020	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
100-42-5	Styrene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
127-18-4	Tetrachloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
156-60-5	trans-1,2-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
75-01-4	Vinyl Chloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:13
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	0.99	01/31/14 22:13
17060-07-0	1,2-Dichloroethane-d4(surr)	105				70	130	%	0.99	01/31/14 22:13
1868-53-7	Dibromofluoromethane(surr)	103				70	130	%	0.99	01/31/14 22:13
2037-26-5	Toluene-d8(surr)	107				70	130	%	0.99	01/31/14 22:13
460-00-4	p-Bromofluorobenzene(surr)	120				70	130	%	0.99	01/31/14 22:13

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 4 (22-23')
 A&B Job Sample ID: 14011206.04

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 11:30
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	17.6

CAS Number	Parameter	Result	Flag	SDL	MDL	ML	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 28.8	Q18,U	28.8	23.7	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-2	>C12-C28 ¹	< 24.6	U	24.6	20.3	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-4	>C28-C35 ¹	< 21.5	U	21.5	17.7	25	1000	mg/Kg	1	01/30/14 17:41
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 17:41
111-85-3	1-Chlorooctane(surr)	100				60	143	%	1	01/30/14 17:41
3386-33-2	Chlorooctadecane(surr)	103				60	150	%	1	01/30/14 17:41

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 1 (17-18')
 A&B Job Sample ID: 14011206.05

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	% Moisture	Sample Matrix	Soil
Analytical Method:	SM 2540G	Date Collected	01/29/2014 13:00
QC Batch ID:	Qb14013056	Date Received	01/29/2014 15:33
Prep Method:	SM 2540G	Date Prepared	01/30/2014 14:00
Prepared By:	MMaldonado		
Prep Batch ID	PB14013028		
Analyst Initial	MAM	% Moisture	15.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MLQ	UQL	Units	DF	Date/Time
	% Moisture ¹	15.6				----	----	%	1	01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 1 (17-18')
A&B Job Sample ID: 14011206.05

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: Volatile Organic Compounds
Analytical Method: SW-846 8260C
QC Batch ID: Qb14020103
Prep Method: SW-846 5035A
Prepared By: BPcastro
Prep Batch ID: PB14020101
Analyst Initial: BPC
Sample Matrix: Soil
Date Collected: 01/29/2014 13:00
Date Received: 01/29/2014 15:33
Date Prepared: 01/31/2014 10:00
% Moisture: 15.6

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Rows list various chemical compounds and their test results.

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 1 (17-18')
 A&B Job Sample ID: 14011206.05

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 13:00
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	15.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MLL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
75-71-8	Dichlorodifluoromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
100-41-4	Ethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
98-82-8	Isopropylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
108-38-3&106-4	m- & p-Xylenes	< 0.005	U	0.005	0.0045	0.01	0.1	mg/Kg	0.99	01/31/14 22:42
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
75-09-2	Methylene chloride	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
91-20-3	Naphthalene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
95-47-6	o-Xylene	< 0.002	U	0.002	0.0020	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
100-42-5	Styrene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
127-18-4	Tetrachloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
156-60-5	trans-1,2-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
75-01-4	Vinyl Chloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 22:42
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	0.99	01/31/14 22:42
17060-07-0	1,2-Dichloroethane-d4(surr)	102				70	130	%	0.99	01/31/14 22:42
1868-53-7	Dibromofluoromethane(surr)	108				70	130	%	0.99	01/31/14 22:42
2037-26-5	Toluene-d8(surr)	105				70	130	%	0.99	01/31/14 22:42
460-00-4	p-Bromofluorobenzene(surr)	123				70	130	%	0.99	01/31/14 22:42

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 1 (17-18')
 A&B Job Sample ID: 14011206.05

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 13:00
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	15.6

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 28.1	Q18,U	28.1	23.7	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-2	>C12-C28 ¹	< 24.1	U	24.1	20.3	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-4	>C28-C35 ¹	< 21	U	21	17.7	25	1000	mg/Kg	1	01/30/14 17:41
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 17:41
111-85-3	1-Chlorooctane(surr)	116				60	143	%	1	01/30/14 17:41
3386-33-2	Chlorooctadecane(surr)	116				60	150	%	1	01/30/14 17:41

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 2 (7-8')
A&B Job Sample ID: 14011206.06

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: % Moisture
Analytical Method: SM 2540G
QC Batch ID: Qb14013056
Prep Method: SM 2540G
Prepared By: MMaldonado
Prep Batch ID: PB14013028
Analyst Initial: MAM
Sample Matrix: Soil
Date Collected: 01/29/2014 13:20
Date Received: 01/29/2014 15:33
Date Prepared: 01/30/2014 14:00
% Moisture: 23.1

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Row 1: % Moisture1, 23.1, ----, ----, %, 1, 01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS---TRRP 13

Client Sample ID: EB 2 (7-8')
A&B Job Sample ID: 14011206.06

Date: 2/7/2014

Client Name: HVJ Associates
Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description: Volatile Organic Compounds
Analytical Method: SW-846 8260C
QC Batch ID: Qb14020103
Prep Method: SW-846 5035A
Prepared By: BPcastro
Prep Batch ID: PB14020101
Analyst Initial: BPC
Sample Matrix: Soil
Date Collected: 01/29/2014 13:20
Date Received: 01/29/2014 15:33
Date Prepared: 01/31/2014 10:00
% Moisture: 23.1

Table with 11 columns: CAS Number, Parameter, Result, Flag, SDL, MDL, MQL, UQL, Units, DF, Date/Time. Rows list various chemical compounds like 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, etc., with their respective test results and flags.

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 2 (7-8')
 A&B Job Sample ID: 14011206.06

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 13:20
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	23.1

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
75-71-8	Dichlorodifluoromethane	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
100-41-4	Ethylbenzene	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
98-82-8	Isopropylbenzene	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
108-38-3&106-4	m- & p-Xylenes	< 0.006	U	0.006	0.0045	0.01	0.1	mg/Kg	0.99	01/31/14 23:11
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
75-09-2	Methylene chloride	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
91-20-3	Naphthalene	< 0.005	U	0.005	0.0035	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
95-47-6	o-Xylene	< 0.003	U	0.003	0.0020	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
100-42-5	Styrene	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
127-18-4	Tetrachloroethylene	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
156-60-5	trans-1,2-Dichloroethylene	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
75-01-4	Vinyl Chloride	< 0.003	U	0.003	0.002	0.005	0.05	mg/Kg	0.99	01/31/14 23:11
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	0.99	01/31/14 23:11
17060-07-0	1,2-Dichloroethane-d4(surr)	104				70	130	%	0.99	01/31/14 23:11
1868-53-7	Dibromofluoromethane(surr)	104				70	130	%	0.99	01/31/14 23:11
2037-26-5	Toluene-d8(surr)	104				70	130	%	0.99	01/31/14 23:11
460-00-4	p-Bromofluorobenzene(surr)	124				70	130	%	0.99	01/31/14 23:11

Soil results reported on dry weight basis



LABORATORY TEST RESULTS---TRRP13

Client Sample ID: EB 2 (7-8')
 A&B Job Sample ID: 14011206.06

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 13:20
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	23.1

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 30.8	Q18,U	30.8	23.7	25	1000	mg/Kg	1	01/30/14 18:29
TPH-1005-2	>C12-C28 ¹	< 26.4	U	26.4	20.3	25	1000	mg/Kg	1	01/30/14 17:41
TPH-1005-4	>C28-C35 ¹	< 23	U	23	17.7	25	1000	mg/Kg	1	01/30/14 18:29
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 18:29
111-85-3	1-Chlorooctane(surr)	113				60	143	%	1	01/30/14 17:41
3386-33-2	Chlorooctadecane(surr)	114				60	150	%	1	01/30/14 17:41

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 3 (22-23)
 A&B Job Sample ID: 14011206.07

Date: 2/7/2014

Client Name: HVJ Associates Attn: Niem Ly
 Project Name: HE1214763 / EWPP Raw Water Line

Test Description:	% Moisture	Sample Matrix	Soil
Analytical Method:	SM 2540G	Date Collected	01/29/2014 14:45
QC Batch ID:	Qb14013056	Date Received	01/29/2014 15:33
Prep Method:	SM 2540G	Date Prepared	01/30/2014 14:00
Prepared By:	MMaldonado		
Prep Batch ID	PB14013028		
Analyst Initial	MAM	% Moisture	15.7

CAS Number	Parameter	Result	Flag	SDL	MDL	MLQ	UQL	Units	DF	Date/Time
	% Moisture ¹	15.7				----	----	%	1	01/30/14 16:01

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 3 (22-23)

Date: 2/7/2014

A&B Job Sample ID: 14011206.07

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 14:45
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	15.7

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
630-20-6	1,1,1,2-Tetrachloroethane	< 0.003	Q18,U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
71-55-6	1,1,1-Trichloroethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
79-34-5	1,1,2,2-Tetrachloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
79-00-5	1,1,2-Trichloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-34-3	1,1-Dichloroethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-35-4	1,1-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
563-58-6	1,1-Dichloropropene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
87-61-6	1,2,3-trichlorobenzene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
96-18-4	1,2,3-Trichloropropane	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
120-82-1	1,2,4-Trichlorobenzene	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
95-63-6	1,2,4-Trimethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
96-12-8	1,2-Dibromo-3-chloropropane	< 0.005	U	0.005	0.0045	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
106-93-4	1,2-Dibromoethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
95-50-1	1,2-Dichlorobenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
107-06-2	1,2-Dichloroethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
78-87-5	1,2-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
108-67-8	1,3,5-Trimethylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
541-73-1	1,3-Dichlorobenzene	< 0.003	U	0.003	0.0027	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
142-28-9	1,3-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
106-46-7	1,4-Dichlorobenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
594-20-7	2,2-Dichloropropane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
95-49-8	2-Chlorotoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
106-43-4	4-Chlorotoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
99-87-6	4-Isopropyltoluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
71-43-2	Benzene	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
108-86-1	Bromobenzene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
74-97-5	Bromochloromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-27-4	Bromodichloromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-25-2	Bromoform	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
74-83-9	Bromomethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
56-23-5	Carbon tetrachloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
108-90-7	Chlorobenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-00-3	Chloroethane	< 0.002	U,V6	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
67-66-3	Chloroform	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
74-87-3	Chloromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
156-59-2	cis-1,2-Dichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
10061-01-5	cis-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 3 (22-23)
 A&B Job Sample ID: 14011206.07

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Volatile Organic Compounds	Sample Matrix	Soil
Analytical Method:	SW-846 8260C	Date Collected	01/29/2014 14:45
QC Batch ID:	Qb14020103	Date Received	01/29/2014 15:33
Prep Method:	SW-846 5035A	Date Prepared	01/31/2014 10:00
Prepared By:	BPcastro		
Prep Batch ID	PB14020101		
Analyst Initial	BPC	% Moisture	15.7

CAS Number	Parameter	Result	Flag	SDL	MDL	MLL	UQL	Units	DF	Date/Time
124-48-1	Dibromochloromethane	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
74-95-3	Dibromomethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-71-8	Dichlorodifluoromethane	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
100-41-4	Ethylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
98-82-8	Isopropylbenzene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
108-38-3&106-4	m- & p-Xylenes	< 0.005	U	0.005	0.0045	0.01	0.1	mg/Kg	1.01	01/31/14 23:40
78-93-3	MEK	< 0.006	U	0.006	0.005	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-09-2	Methylene chloride	< 0.004	U	0.004	0.003	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
91-20-3	Naphthalene	< 0.004	U	0.004	0.0035	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
104-51-8	n-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
103-65-1	n-Propylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
95-47-6	o-Xylene	< 0.002	U	0.002	0.0020	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
135-98-8	sec-Butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
100-42-5	Styrene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
98-06-6	t-butylbenzene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
127-18-4	Tetrachloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
108-88-3	Toluene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
156-60-5	trans-1,2-Dichloroethylene	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
10061-02-6	trans-1,3-Dichloropropene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
79-01-6	Trichloroethylene	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-69-4	Trichlorofluoromethane	< 0.003	U	0.003	0.0025	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
75-01-4	Vinyl Chloride	< 0.002	U	0.002	0.002	0.005	0.05	mg/Kg	1.01	01/31/14 23:40
1330-20-7	Xylenes	< 0.006	U	0.006	0.005	0.005	0.15	mg/Kg	1.01	01/31/14 23:40
17060-07-0	1,2-Dichloroethane-d4(surr)	100				70	130	%	1.01	01/31/14 23:40
1868-53-7	Dibromofluoromethane(surr)	104				70	130	%	1.01	01/31/14 23:40
2037-26-5	Toluene-d8(surr)	107				70	130	%	1.01	01/31/14 23:40
460-00-4	p-Bromofluorobenzene(surr)	123				70	130	%	1.01	01/31/14 23:40

Soil results reported on dry weight basis



LABORATORY TEST RESULTS --- TRRP 13

Client Sample ID: EB 3 (22-23)
 A&B Job Sample ID: 14011206.07

Date: 2/7/2014

Client Name: HVJ Associates
 Project Name: HE1214763 / EWPP Raw Water Line

Attn: Niem Ly

Test Description:	Total Petroleum Hydrocarbons	Sample Matrix	Soil
Analytical Method:	TX 1005	Date Collected	01/29/2014 14:45
QC Batch ID:	Qb14013104	Date Received	01/29/2014 15:33
Prep Method:	TX 1005	Date Prepared	01/30/2014 17:00
Prepared By:	AVBembde		
Prep Batch ID	PB14013105		
Analyst Initial	AVB	% Moisture	15.7

CAS Number	Parameter	Result	Flag	SDL	MDL	MQL	UQL	Units	DF	Date/Time
TPH-1005-1	C6-C12 ¹	< 28.1	Q18,U	28.1	23.7	25	1000	mg/Kg	1	01/30/14 18:30
TPH-1005-2	>C12-C28 ¹	< 24.1	U	24.1	20.3	25	1000	mg/Kg	1	01/30/14 18:30
TPH-1005-4	>C28-C35 ¹	< 21	U	21	17.7	25	1000	mg/Kg	1	01/30/14 18:30
	Total C6-C35	<				----	----	mg/Kg	1	01/30/14 18:30
111-85-3	1-Chlorooctane(surr)	114				60	143	%	1	01/30/14 18:30
3386-33-2	Chlorooctadecane(surr)	112				60	150	%	1	01/30/14 18:30

Soil results reported on dry weight basis
¹-Parameter not available for accreditation

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013104 **Created Date :** 01/31/14 **Created By :** AVBembde

Samples in This QC Batch : 14011206.01,03,04,05,06,07

Sample Preparation : PB14013105 **Prep Method :** TX 1005 **Prep Date :** 01/30/14 17:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
C6-C12	TPH-1005-1	< MDL	mg/Kg	1	25	23.7	
>C12-C28	TPH-1005-2	< MDL	mg/Kg	1	25	20.3	
>C28-C35	TPH-1005-4	< MDL	mg/Kg	1	25	17.7	
Total C6-C35		< MDL	mg/Kg	1	---		
Chlorooctadecane(surr)	3386-33-2	104	%	1			
1-Chlorooctane(surr)	111-85-3	102	%	1			

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	461	92.2	500	458	91.6	0.7	20	75-125	
>C12-C28	500	430	86	500	442	88.4	2.8	20	75-125	
>C28-C35	500	481	96.2	500	432	86.4	10.7	20	75-125	

QC Type: MS and MSD

QC Sample ID: 14011206.04

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	500	465	89.9	500	479	92.7	3.1	20	75-125	
>C12-C28	BRL	500	451	86.6	500	475	91.4	5.4	20	75-125	
>C28-C35	BRL	500	435	86.6	500	464	92.4	6.5	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013107 Created Date : 01/30/14 Created By : BPcastro

Samples in This QC Batch : 14011206.02

Sample Preparation : PB14013114 Prep Method : SW-846 5030C Prep Date : 01/30/14 12:00 Prep By : BPcastro

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
1,1,1,2-Tetrachloroethane	630-20-6	< MDL	mg/L	1	0.005	0.001	
1,1,1-Trichloroethane	71-55-6	< MDL	mg/L	1	0.005	0.001	
1,1,2,2-Tetrachloroethane	79-34-5	< MDL	mg/L	1	0.005	0.001	
1,1,2-Trichloroethane	79-00-5	< MDL	mg/L	1	0.005	0.001	
1,1-Dichloroethane	75-34-3	< MDL	mg/L	1	0.005	0.001	
1,1-Dichloroethylene	75-35-4	< MDL	mg/L	1	0.005	0.001	
1,1-Dichloropropene	563-58-6	< MDL	mg/L	1	0.005	0.001	
1,2,3-trichlorobenzene	87-61-6	< MDL	mg/L	1	0.005	0.001	
1,2,3-Trichloropropane	96-18-4	< MDL	mg/L	1	0.005	0.002	V6
1,2,4-Trichlorobenzene	120-82-1	< MDL	mg/L	1	0.005	0.001	
1,2,4-Trimethylbenzene	95-63-6	< MDL	mg/L	1	0.005	0.001	
1,2-Dibromo-3-chloropropa	96-12-8	< MDL	mg/L	1	0.005	0.001	
1,2-Dibromoethane	106-93-4	< MDL	mg/L	1	0.005	0.001	
1,2-Dichlorobenzene	95-50-1	< MDL	mg/L	1	0.005	0.001	
1,2-Dichloroethane	107-06-2	< MDL	mg/L	1	0.005	0.001	
1,2-Dichloropropane	78-87-5	< MDL	mg/L	1	0.005	0.001	
1,3,5-Trimethylbenzene	108-67-8	< MDL	mg/L	1	0.005	0.001	
1,3-Dichlorobenzene	541-73-1	< MDL	mg/L	1	0.005	0.001	
1,3-Dichloropropane	142-28-9	< MDL	mg/L	1	0.005	0.002	
1,4-Dichlorobenzene	106-46-7	< MDL	mg/L	1	0.005	0.001	
2,2-Dichloropropane	594-20-7	< MDL	mg/L	1	0.005	0.003	
2-Chlorotoluene	95-49-8	< MDL	mg/L	1	0.005	0.001	
4-Chlorotoluene	106-43-4	< MDL	mg/L	1	0.005	0.001	
4-Isopropyltoluene	99-87-6	< MDL	mg/L	1	0.005	0.001	
Benzene	71-43-2	< MDL	mg/L	1	0.005	0.001	
Bromobenzene	108-86-1	< MDL	mg/L	1	0.005	0.001	
Bromochloromethane	74-97-5	< MDL	mg/L	1	0.005	0.001	
Bromodichloromethane	75-27-4	< MDL	mg/L	1	0.005	0.001	
Bromoform	75-25-2	< MDL	mg/L	1	0.005	0.002	
Bromomethane	74-83-9	< MDL	mg/L	1	0.005	0.001	V7
Carbon tetrachloride	56-23-5	< MDL	mg/L	1	0.005	0.001	
Chlorobenzene	108-90-7	< MDL	mg/L	1	0.005	0.001	
Chloroethane	75-00-3	< MDL	mg/L	1	0.005	0.002	
Chloroform	67-66-3	< MDL	mg/L	1	0.005	0.001	
Chloromethane	74-87-3	< MDL	mg/L	1	0.005	0.001	
cis-1,2-Dichloroethylene	156-59-2	< MDL	mg/L	1	0.005	0.001	
cis-1,3-Dichloropropene	10061-01-5	< MDL	mg/L	1	0.005	0.001	
Dibromochloromethane	124-48-1	< MDL	mg/L	1	0.005	0.001	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013107 Created Date : 01/30/14 Created By : BPcastro

Samples in This QC Batch : 14011206.02

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
Dibromomethane	74-95-3	< MDL	mg/L	1	0.005	0.003	
Dichlorodifluoromethane	75-71-8	< MDL	mg/L	1	0.005	0.001	
Ethylbenzene	100-41-4	< MDL	mg/L	1	0.005	0.001	
Isopropylbenzene	98-82-8	< MDL	mg/L	1	0.005	0.001	
m- & p-Xylenes	108-38-3&106-42-3	< MDL	mg/L	1	0.01	0.002	
MEK	78-93-3	< MDL	mg/L	1	0.005	0.002	
Methylene chloride	75-09-2	< MDL	mg/L	1	0.005	0.001	
Naphthalene	91-20-3	< MDL	mg/L	1	0.005	0.002	
n-Butylbenzene	104-51-8	< MDL	mg/L	1	0.005	0.001	
n-Propylbenzene	103-65-1	< MDL	mg/L	1	0.005	0.001	
o-Xylene	95-47-6	< MDL	mg/L	1	0.005	0.001	
sec-Butylbenzene	135-98-8	< MDL	mg/L	1	0.005	0.001	
Styrene	100-42-5	< MDL	mg/L	1	0.005	0.001	
t-butylbenzene	98-06-6	< MDL	mg/L	1	0.005	0.001	
Tetrachloroethylene	127-18-4	< MDL	mg/L	1	0.005	0.001	
Toluene	108-88-3	< MDL	mg/L	1	0.005	0.001	
trans-1,2-Dichloroethylene	156-60-5	< MDL	mg/L	1	0.005	0.001	
trans-1,3-Dichloropropene	10061-02-6	< MDL	mg/L	1	0.005	0.001	
Trichloroethylene	79-01-6	< MDL	mg/L	1	0.005	0.003	
Trichlorofluoromethane	75-69-4	< MDL	mg/L	1	0.005	0.001	
Vinyl Chloride	75-01-4	< MDL	mg/L	1	0.005	0.001	
Xylenes	1330-20-7	< MDL	mg/L	1	0.015	0.003	
Dibromofluoromethane(surr)	1868-53-7	99.6	%	1			
1,2-Dichloroethane-d4(surr)	17060-07-0	101	%	1			
Toluene-d8(surr)	2037-26-5	97.4	%	1			
p-Bromofluorobenzene(surr)	460-00-4	113	%	1			

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.022	110	0.02	0.023	115	4.4	12	86.6-113	L1
1,1,1-Trichloroethane	0.02	0.02	100	0.02	0.021	105	4.9	13	76.9-125	
1,1,2,2-Tetrachloroethane	0.02	0.021	105	0.02	0.021	105	0	20	74.4-125	
1,1,2-Trichloroethane	0.02	0.021	105	0.02	0.021	105	0	14	82.4-117	
1,1-Dichloroethane	0.02	0.021	105	0.02	0.019	95	10	12	74.5-125	
1,1-Dichloroethylene	0.02	0.02	100	0.02	0.018	90	10.5	12	75.4-124	
1,1-Dichloropropene	0.02	0.02	100	0.02	0.02	100	0	12	76.9-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013107 Created Date : 01/30/14 Created By : BPcastro

Samples in This QC Batch : 14011206.02

QC Type: LCS and LCSD										
Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrLimit	%Recovery CtrLimit	Qual
1,2,3-trichlorobenzene	0.02	0.023	115	0.02	0.023	115	0	20	70.8-125	
1,2,3-Trichloropropane	0.02	0.02	100	0.02	0.02	100	0	22	69.6-126	V6
1,2,4-Trichlorobenzene	0.02	0.022	110	0.02	0.023	115	4.4	16	74.8-121	
1,2,4-Trimethylbenzene	0.02	0.023	115	0.02	0.021	105	9.1	12	80.4-114	
1,2-Dibromo-3-chloropropa	0.02	0.022	110	0.02	0.022	110	0	27	61.7-140	
1,2-Dibromoethane	0.02	0.022	110	0.02	0.022	110	0	15	80.6-118	
1,2-Dichlorobenzene	0.02	0.022	110	0.02	0.022	110	0	11	82.6-113	
1,2-Dichloroethane	0.02	0.019	95	0.02	0.021	105	10	14	72.8-126	
1,2-Dichloropropane	0.02	0.02	100	0.02	0.021	105	4.9	13	82.4-120	
1,3,5-Trimethylbenzene	0.02	0.022	110	0.02	0.022	110	0	10	81.3-114	
1,3-Dichlorobenzene	0.02	0.022	110	0.02	0.022	110	0	11	83.4-113	
1,3-Dichloropropane	0.02	0.018	90	0.02	0.018	90	0	16	79.8-115	
1,4-Dichlorobenzene	0.02	0.022	110	0.02	0.022	110	0	11	82.6-113	
2,2-Dichloropropane	0.02	0.02	100	0.02	0.02	100	0	15	69.4-131	
2-Chlorotoluene	0.02	0.022	110	0.02	0.02	100	9.5	17	77.8-118	
4-Chlorotoluene	0.02	0.022	110	0.02	0.016	80	31.6	15	78.8-117	R4
4-Isopropyltoluene	0.02	0.022	110	0.02	0.021	105	4.6	11	80.9-114	
Benzene	0.02	0.021	105	0.02	0.02	100	4.9	11	84.1-118	
Bromobenzene	0.02	0.022	110	0.02	0.022	110	0	12	82.8-116	
Bromochloromethane	0.02	0.019	95	0.02	0.018	90	5.4	15	70.7-131	
Bromodichloromethane	0.02	0.021	105	0.02	0.022	110	4.6	12	83.1-119	
Bromoform	0.02	0.021	105	0.02	0.022	110	4.6	20	70.3-136	
Bromomethane	0.02	0.024	120	0.02	0.024	120	0	23	59-134	V7
Carbon tetrachloride	0.02	0.022	110	0.02	0.022	110	0	13	74.6-129	
Chlorobenzene	0.02	0.022	110	0.02	0.022	110	0	11	87.8-110	
Chloroethane	0.02	0.021	105	0.02	0.019	95	10	13	73.7-124	
Chloroform	0.02	0.021	105	0.02	0.021	105	0	10	76.4-124	
Chloromethane	0.02	0.018	90	0.02	0.016	80	11.8	15	59.4-138	
cis-1,2-Dichloroethylene	0.02	0.02	100	0.02	0.018	90	10.5	15	74.3-124	
cis-1,3-Dichloropropene	0.02	0.021	105	0.02	0.022	110	4.6	11	84.6-117	
Dibromochloromethane	0.02	0.022	110	0.02	0.023	115	4.4	13	81.6-118	
Dibromomethane	0.02	0.022	110	0.02	0.022	110	0	16	75.8-126	
Dichlorodifluoromethane	0.02	0.021	105	0.02	0.021	105	0	15	44.4-149	
Ethylbenzene	0.02	0.022	110	0.02	0.022	110	0	12	82.8-114	
Isopropylbenzene	0.02	0.021	105	0.02	0.021	105	0	11	86.8-113	
m- & p-Xylenes	0.04	0.041	103	0.04	0.042	105	2.4	10	76.9-122	
MEK	0.02	0.017	85	0.02	0.015	75	12.5	42	44.9-154	
Methylene chloride	0.02	0.02	100	0.02	0.021	105	4.9	13	67.3-130	
Naphthalene	0.02	0.021	105	0.02	0.022	110	4.6	27	55.8-136	
n-Butylbenzene	0.02	0.021	105	0.02	0.02	100	4.9	20	74.1-120	
n-Propylbenzene	0.02	0.021	105	0.02	0.021	105	0	12	78.9-115	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013107 Created Date : 01/30/14 Created By : BPcastro

Samples in This QC Batch : 14011206.02

QC Type: LCS and LCSD										
Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
o-Xylene	0.02	0.021	105	0.02	0.021	105	0	11	86-111	
sec-Butylbenzene	0.02	0.021	105	0.02	0.021	105	0	12	80.2-115	
Styrene	0.02	0.02	100	0.02	0.022	110	9.5	12	86.7-111	
t-butylbenzene	0.02	0.023	115	0.02	0.022	110	4.4	14	80.7-116	
Tetrachloroethylene	0.02	0.023	115	0.02	0.023	115	0	27	77.9-126	
Toluene	0.02	0.021	105	0.02	0.021	105	0	12	85.9-110	
trans-1,2-Dichloroethylene	0.02	0.02	100	0.02	0.019	95	5.1	12	73.7-124	
trans-1,3-Dichloropropene	0.02	0.021	105	0.02	0.023	115	9.1	14	83-114	L1
Trichloroethylene	0.02	0.021	105	0.02	0.022	110	4.6	12	85.4-114	
Trichlorofluoromethane	0.02	0.021	105	0.02	0.021	105	0	12	74.3-126	
Vinyl Chloride	0.02	0.02	100	0.02	0.021	105	4.9	17	68-129	
Xylenes	0.06	0.062	103	0.06	0.063	105	1.6	9	81.2-117	

QC Type: MS and MSD											
QC Sample ID: 14011206.02											
Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	72-139	
1,1,1-Trichloroethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	82-137	
1,1,2,2-Tetrachloroethane	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	55-149	
1,1,2-Trichloroethane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	68-139	
1,1-Dichloroethane	BRL	0.02	0.015	75	0.02	0.016	80	6.4	35	78-134	M9
1,1-Dichloroethylene	BRL	0.02	0.013	65	0.02	0.014	70	7.4	35	65-141	
1,1-Dichloropropene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	79-136	
1,2,3-trichlorobenzene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	54-144	
1,2,3-Trichloropropane	BRL	0.02	0.016	80	0.02	0.019	95	17.1	35	58-156	V6
1,2,4-Trichlorobenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	69-127	
1,2,4-Trimethylbenzene	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	80-131	
1,2-Dibromo-3-chloropropa	BRL	0.02	0.016	80	0.02	0.022	110	31.6	35	61-145	
1,2-Dibromoethane	BRL	0.02	0.018	90	0.02	0.02	100	10.5	35	68-140	
1,2-Dichlorobenzene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	70-138	
1,2-Dichloroethane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	67-152	
1,2-Dichloropropane	BRL	0.02	0.015	75	0.02	0.018	90	18.2	35	79-135	M9
1,3,5-Trimethylbenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	79-133	
1,3-Dichlorobenzene	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	79-128	
1,3-Dichloropropane	BRL	0.02	0.014	70	0.02	0.015	75	6.9	35	70-147	
1,4-Dichlorobenzene	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	76-127	
2,2-Dichloropropane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	60-129	
2-Chlorotoluene	BRL	0.02	0.016	80	0.02	0.019	95	17.1	35	83-130	M9
4-Chlorotoluene	BRL	0.02	0.015	75	0.02	0.016	80	6.4	35	82-129	M9

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14013107 Created Date : 01/30/14 Created By : BPcastro

Samples in This QC Batch : 14011206.02

QC Type: MS and MSD											
QC Sample ID: 14011206.02											
Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
4-Isopropyltoluene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	78-129	
Benzene	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	73-129	
Bromobenzene	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	76-132	
Bromochloromethane	BRL	0.02	0.014	70	0.02	0.016	80	13.3	35	76-135	M9
Bromodichloromethane	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	80-136	
Bromoform	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	65-139	
Bromomethane	BRL	0.02	0.021	105	0.02	0.022	110	4.6	35	65-150	V7
Carbon tetrachloride	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	70-136	
Chlorobenzene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	69-123	
Chloroethane	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	74-145	
Chloroform	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	78-132	
Chloromethane	BRL	0.02	0.015	75	0.02	0.018	90	18.2	35	69-139	
cis-1,2-Dichloroethylene	BRL	0.02	0.016	80	0.02	0.017	85	6.1	35	71-134	
cis-1,3-Dichloropropene	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	74-128	
Dibromochloromethane	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	67-141	
Dibromomethane	BRL	0.02	0.018	90	0.02	0.02	100	10.5	35	75-135	
Dichlorodifluoromethane	BRL	0.02	0.02	100	0.02	0.022	110	9.5	35	62-146	
Ethylbenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	80-132	
Isopropylbenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	78-137	
m- & p-Xylenes	BRL	0.04	0.032	80	0.04	0.034	85	6.1	35	74-127	
MEK	BRL	0.02	0.014	70	0.02	0.015	75	6.9	35	52-148	
Methylene chloride	BRL	0.02	0.016	80	0.02	0.018	90	11.8	35	68-131	
Naphthalene	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	61-116	
n-Butylbenzene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	73-140	
n-Propylbenzene	BRL	0.02	0.016	80	0.02	0.017	85	6.1	35	75-127	
o-Xylene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	74-126	
sec-Butylbenzene	BRL	0.02	0.016	80	0.02	0.017	85	6.1	35	75-129	
Styrene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	77-123	
t-butylbenzene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	75-126	
Tetrachloroethylene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	70-130	
Toluene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	72-121	
trans-1,2-Dichloroethylene	BRL	0.02	0.015	75	0.02	0.016	80	6.4	35	73-138	
trans-1,3-Dichloropropene	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	70-133	
Trichloroethylene	BRL	0.02	0.017	85	0.02	0.019	95	11.1	35	6-138	
Trichlorofluoromethane	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	67-148	
Vinyl Chloride	BRL	0.02	0.019	95	0.02	0.02	100	5.1	35	80-122	
Xylenes	BRL	0.06	0.049	81.7	0.06	0.052	86.7	5.9	35	73-127	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14020103 Created Date : 01/31/14 Created By : BPcastro

Samples in This QC Batch : 14011206.01,03,04,05,06,07

Sample Preparation : PB14020101 Prep Method : SW-846 5035A Prep Date : 01/31/14 10:00 Prep By : BPcastro

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
1,1,1,2-Tetrachloroethane	630-20-6	< MDL	mg/Kg	1	0.005	0.0025	
1,1,1-Trichloroethane	71-55-6	< MDL	mg/Kg	1	0.005	0.003	
1,1,2,2-Tetrachloroethane	79-34-5	< MDL	mg/Kg	1	0.005	0.0025	
1,1,2-Trichloroethane	79-00-5	< MDL	mg/Kg	1	0.005	0.0025	
1,1-Dichloroethane	75-34-3	< MDL	mg/Kg	1	0.005	0.002	
1,1-Dichloroethylene	75-35-4	< MDL	mg/Kg	1	0.005	0.002	
1,1-Dichloropropene	563-58-6	< MDL	mg/Kg	1	0.005	0.002	
1,2,3-trichlorobenzene	87-61-6	< MDL	mg/Kg	1	0.005	0.0035	
1,2,3-Trichloropropane	96-18-4	< MDL	mg/Kg	1	0.005	0.005	
1,2,4-Trichlorobenzene	120-82-1	< MDL	mg/Kg	1	0.005	0.003	
1,2,4-Trimethylbenzene	95-63-6	< MDL	mg/Kg	1	0.005	0.002	
1,2-Dibromo-3-chloropropa	96-12-8	< MDL	mg/Kg	1	0.005	0.0045	
1,2-Dibromoethane	106-93-4	< MDL	mg/Kg	1	0.005	0.0025	
1,2-Dichlorobenzene	95-50-1	< MDL	mg/Kg	1	0.005	0.0025	
1,2-Dichloroethane	107-06-2	< MDL	mg/Kg	1	0.005	0.0025	
1,2-Dichloropropane	78-87-5	< MDL	mg/Kg	1	0.005	0.0025	
1,3,5-Trimethylbenzene	108-67-8	< MDL	mg/Kg	1	0.005	0.0025	
1,3-Dichlorobenzene	541-73-1	< MDL	mg/Kg	1	0.005	0.0027	
1,3-Dichloropropane	142-28-9	< MDL	mg/Kg	1	0.005	0.0025	
1,4-Dichlorobenzene	106-46-7	< MDL	mg/Kg	1	0.005	0.0025	
2,2-Dichloropropane	594-20-7	< MDL	mg/Kg	1	0.005	0.0025	
2-Chlorotoluene	95-49-8	< MDL	mg/Kg	1	0.005	0.0025	
4-Chlorotoluene	106-43-4	< MDL	mg/Kg	1	0.005	0.0025	
4-Isopropyltoluene	99-87-6	< MDL	mg/Kg	1	0.005	0.0025	
Benzene	71-43-2	< MDL	mg/Kg	1	0.005	0.003	
Bromobenzene	108-86-1	< MDL	mg/Kg	1	0.005	0.0035	
Bromochloromethane	74-97-5	< MDL	mg/Kg	1	0.005	0.0025	
Bromodichloromethane	75-27-4	< MDL	mg/Kg	1	0.005	0.0025	
Bromoform	75-25-2	< MDL	mg/Kg	1	0.005	0.0025	
Bromomethane	74-83-9	< MDL	mg/Kg	1	0.005	0.002	
Carbon tetrachloride	56-23-5	< MDL	mg/Kg	1	0.005	0.002	
Chlorobenzene	108-90-7	< MDL	mg/Kg	1	0.005	0.002	
Chloroethane	75-00-3	< MDL	mg/Kg	1	0.005	0.002	V6
Chloroform	67-66-3	< MDL	mg/Kg	1	0.005	0.0025	
Chloromethane	74-87-3	< MDL	mg/Kg	1	0.005	0.002	
cis-1,2-Dichloroethylene	156-59-2	< MDL	mg/Kg	1	0.005	0.0025	
cis-1,3-Dichloropropene	10061-01-5	< MDL	mg/Kg	1	0.005	0.0025	
Dibromochloromethane	124-48-1	< MDL	mg/Kg	1	0.005	0.003	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14020103 Created Date : 01/31/14 Created By : BPcastro

Samples in This QC Batch : 14011206.01,03,04,05,06,07

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
Dibromomethane	74-95-3	< MDL	mg/Kg	1	0.005	0.0025	
Dichlorodifluoromethane	75-71-8	< MDL	mg/Kg	1	0.005	0.002	
Ethylbenzene	100-41-4	< MDL	mg/Kg	1	0.005	0.002	
Isopropylbenzene	98-82-8	< MDL	mg/Kg	1	0.005	0.002	
m- & p-Xylenes	108-38-3&106-42-3	< MDL	mg/Kg	1	0.01	0.0045	
MEK	78-93-3	< MDL	mg/Kg	1	0.005	0.005	
Methylene chloride	75-09-2	< MDL	mg/Kg	1	0.005	0.003	
Naphthalene	91-20-3	< MDL	mg/Kg	1	0.005	0.0035	
n-Butylbenzene	104-51-8	< MDL	mg/Kg	1	0.005	0.0025	
n-Propylbenzene	103-65-1	< MDL	mg/Kg	1	0.005	0.0025	
o-Xylene	95-47-6	< MDL	mg/Kg	1	0.005	0.0020	
sec-Butylbenzene	135-98-8	< MDL	mg/Kg	1	0.005	0.0025	
Styrene	100-42-5	< MDL	mg/Kg	1	0.005	0.002	
t-butylbenzene	98-06-6	< MDL	mg/Kg	1	0.005	0.0025	
Tetrachloroethylene	127-18-4	< MDL	mg/Kg	1	0.005	0.002	
Toluene	108-88-3	< MDL	mg/Kg	1	0.005	0.0025	
trans-1,2-Dichloroethylene	156-60-5	< MDL	mg/Kg	1	0.005	0.002	
trans-1,3-Dichloropropene	10061-02-6	< MDL	mg/Kg	1	0.005	0.0025	
Trichloroethylene	79-01-6	< MDL	mg/Kg	1	0.005	0.0025	
Trichlorofluoromethane	75-69-4	< MDL	mg/Kg	1	0.005	0.0025	
Vinyl Chloride	75-01-4	< MDL	mg/Kg	1	0.005	0.002	
Xylenes	1330-20-7	< MDL	mg/Kg	1	0.005	0.005	
Dibromofluoromethane(surr)	1868-53-7	97.2	%	1			
1,2-Dichloroethane-d4(surr)	17060-07-0	91.2	%	1			
Toluene-d8(surr)	2037-26-5	107	%	1			
p-Bromofluorobenzene(surr)	460-00-4	122	%	1			

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.021	105	0.02	0.021	105	0	30	71.4-131	
1,1,1-Trichloroethane	0.02	0.019	95	0.02	0.019	95	0	30	69.6-140	
1,1,2,2-Tetrachloroethane	0.02	0.019	95	0.02	0.02	100	5.1	30	66.6-128	
1,1,2-Trichloroethane	0.02	0.02	100	0.02	0.019	95	5.1	30	72.8-125	
1,1-Dichloroethane	0.02	0.019	95	0.02	0.019	95	0	30	72.7-129	
1,1-Dichloroethylene	0.02	0.019	95	0.02	0.019	95	0	30	71.4-131	
1,1-Dichloropropene	0.02	0.019	95	0.02	0.02	100	5.1	30	75.9-132	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14020103 Created Date : 01/31/14 Created By : BPcastro

Samples in This QC Batch : 14011206.01,03,04,05,06,07

QC Type: LCS and LCSD										
Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,2,3-trichlorobenzene	0.02	0.022	110	0.02	0.022	110	0	30	56.7-153	
1,2,3-Trichloropropane	0.02	0.02	100	0.02	0.019	95	5.1	30	61.6-138	
1,2,4-Trichlorobenzene	0.02	0.021	105	0.02	0.021	105	0	30	55.9-150	
1,2,4-Trimethylbenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	71.1-131	
1,2-Dibromo-3-chloropropa	0.02	0.02	100	0.02	0.02	100	0	30	52.4-150	
1,2-Dibromoethane	0.02	0.021	105	0.02	0.021	105	0	30	72.9-125	
1,2-Dichlorobenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	76.1-126	
1,2-Dichloroethane	0.02	0.019	95	0.02	0.018	90	5.4	30	66.4-134	
1,2-Dichloropropane	0.02	0.019	95	0.02	0.019	95	0	30	70.2-128	
1,3,5-Trimethylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	75.1-127	
1,3-Dichlorobenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	73.9-126	
1,3-Dichloropropane	0.02	0.019	95	0.02	0.019	95	0	30	68.3-124	
1,4-Dichlorobenzene	0.02	0.02	100	0.02	0.02	100	0	30	72.3-127	
2,2-Dichloropropane	0.02	0.018	90	0.02	0.019	95	5.4	30	68.5-138	
2-Chlorotoluene	0.02	0.02	100	0.02	0.02	100	0	30	71.7-128	
4-Chlorotoluene	0.02	0.02	100	0.02	0.02	100	0	30	72.2-126	
4-Isopropyltoluene	0.02	0.021	105	0.02	0.021	105	0	30	77.5-125	
Benzene	0.02	0.019	95	0.02	0.019	95	0	30	74-126	
Bromobenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	73.3-129	
Bromochloromethane	0.02	0.018	90	0.02	0.018	90	0	30	68.8-131	
Bromodichloromethane	0.02	0.019	95	0.02	0.019	95	0	30	69-135	
Bromoform	0.02	0.021	105	0.02	0.021	105	0	30	62-146	
Bromomethane	0.02	0.018	90	0.02	0.018	90	0	30	58.7-139	
Carbon tetrachloride	0.02	0.019	95	0.02	0.019	95	0	30	68.7-135	
Chlorobenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	73.3-129	
Chloroethane	0.02	0.021	105	0.02	0.022	110	4.6	30	66.2-129	
Chloroform	0.02	0.019	95	0.02	0.019	95	0	30	73.7-134	
Chloromethane	0.02	0.018	90	0.02	0.018	90	0	30	51.4-135	V6
cis-1,2-Dichloroethylene	0.02	0.019	95	0.02	0.019	95	0	30	72.4-132	
cis-1,3-Dichloropropene	0.02	0.019	95	0.02	0.019	95	0	30	67.7-134	
Dibromochloromethane	0.02	0.021	105	0.02	0.021	105	0	30	73.2-126	
Dibromomethane	0.02	0.019	95	0.02	0.019	95	0	30	69.9-134	
Dichlorodifluoromethane	0.02	0.02	100	0.02	0.021	105	4.9	30	36.8-144	
Ethylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	72.2-128	
Isopropylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	71.2-131	
m- & p-Xylenes	0.04	0.041	103	0.04	0.042	105	2.4	30	70.7-131	
MEK	0.02	0.017	85	0.02	0.018	90	5.7	30	52.5-152	
Methylene chloride	0.02	0.018	90	0.02	0.019	95	5.4	30	70.6-129	
Naphthalene	0.02	0.024	120	0.02	0.025	125	4.1	30	60.7-145	
n-Butylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	66.5-136	
n-Propylbenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	73.3-126	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14020103 Created Date : 01/31/14 Created By : BPcastro

Samples in This QC Batch : 14011206.01,03,04,05,06,07

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
o-Xylene	0.02	0.021	105	0.02	0.021	105	0	30	71.6-130	
sec-Butylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	77.9-124	
Styrene	0.02	0.021	105	0.02	0.021	105	0	30	71.1-131	
t-butylbenzene	0.02	0.021	105	0.02	0.021	105	0	30	74.4-130	
Tetrachloroethylene	0.02	0.022	110	0.02	0.021	105	4.6	30	62.6-157	
Toluene	0.02	0.021	105	0.02	0.02	100	4.9	30	73.3-127	
trans-1,2-Dichloroethylene	0.02	0.019	95	0.02	0.019	95	0	30	80-120	
trans-1,3-Dichloropropene	0.02	0.02	100	0.02	0.02	100	0	30	71.5-124	
Trichloroethylene	0.02	0.018	90	0.02	0.018	90	0	30	69.2-133	
Trichlorofluoromethane	0.02	0.019	95	0.02	0.019	95	0	30	63.9-140	
Vinyl Chloride	0.02	0.018	90	0.02	0.018	90	0	30	40.9-159	
Xylenes	0.06	0.062	103	0.06	0.063	105	1.6	30	69.2-133	

QC Type: MS and MSD

QC Sample ID: 14011212.02

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	71.4-131	
1,1,1-Trichloroethane	BRL	0.02	0.017	85	0.02	0.017	85	0	35	69.6-140	
1,1,2,2-Tetrachloroethane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	66.6-128	
1,1,2-Trichloroethane	BRL	0.02	0.016	80	0.02	0.016	80	0	35	72.8-125	
1,1-Dichloroethane	BRL	0.02	0.016	80	0.02	0.016	80	0	35	72.7-129	
1,1-Dichloroethylene	BRL	0.02	0.017	85	0.02	0.016	80	6.1	35	71.4-131	
1,1-Dichloropropene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	75.9-132	
1,2,3-trichlorobenzene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	56.7-153	
1,2,3-Trichloropropane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	61.6-138	
1,2,4-Trichlorobenzene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	55.9-150	
1,2,4-Trimethylbenzene	BRL	0.02	0.011	55	0.02	0.013	65	16.7	35	71.1-131	M9
1,2-Dibromo-3-chloropropa	BRL	0.02	0.015	75	0.02	0.015	75	0	35	52.4-150	
1,2-Dibromoethane	BRL	0.02	0.017	85	0.02	0.017	85	0	35	72.9-125	
1,2-Dichlorobenzene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	76.1-126	
1,2-Dichloroethane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	66.4-134	
1,2-Dichloropropane	BRL	0.02	0.017	85	0.02	0.017	85	0	35	70.2-128	
1,3,5-Trimethylbenzene	BRL	0.02	0.018	90	0.02	0.017	85	5.7	35	75.1-127	
1,3-Dichlorobenzene	BRL	0.02	0.017	85	0.02	0.016	80	6.1	35	73.9-126	
1,3-Dichloropropane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	68.3-124	
1,4-Dichlorobenzene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	72.3-127	
2,2-Dichloropropane	BRL	0.02	0.015	75	0.02	0.014	70	6.9	35	68.5-138	
2-Chlorotoluene	BRL	0.02	0.017	85	0.02	0.016	80	6.1	35	71.7-128	
4-Chlorotoluene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	72.2-126	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

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

QC Batch ID : Qb14020103 Created Date : 01/31/14 Created By : BPcastro

Samples in This QC Batch : 14011206.01,03,04,05,06,07

QC Type: MS and MSD											
QC Sample ID: 14011212.02											
Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
4-Isopropyltoluene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	77.5-125	
Benzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	74-126	
Bromobenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	73.3-129	
Bromochloromethane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	68.8-131	
Bromodichloromethane	BRL	0.02	0.016	80	0.02	0.016	80	0	35	69-135	
Bromoform	BRL	0.02	0.017	85	0.02	0.017	85	0	35	62-146	
Bromomethane	BRL	0.02	0.01	50	0.02	0.0081	40.5	21	35	58.7-139	M9
Carbon tetrachloride	BRL	0.02	0.018	90	0.02	0.017	85	5.7	35	68.7-135	
Chlorobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	73.3-129	
Chloroethane	BRL	0.02	0.022	110	0.02	0.022	110	0	35	66.2-129	
Chloroform	BRL	0.02	0.016	80	0.02	0.016	80	0	35	73.7-134	
Chloromethane	BRL	0.02	0.015	75	0.02	0.015	75	0	35	51.4-135	
cis-1,2-Dichloroethylene	BRL	0.02	0.016	80	0.02	0.016	80	0	35	72.4-132	
cis-1,3-Dichloropropene	BRL	0.02	0.016	80	0.02	0.015	75	6.4	35	67.7-134	
Dibromochloromethane	BRL	0.02	0.018	90	0.02	0.017	85	5.7	35	73.2-126	
Dibromomethane	BRL	0.02	0.016	80	0.02	0.016	80	0	35	69.9-134	
Dichlorodifluoromethane	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	36.8-144	
Ethylbenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	72.2-128	
Isopropylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	71.2-131	
m- & p-Xylenes	BRL	0.04	0.029	72.5	0.039	0.031	79.5	6.7	35	70.7-131	
MEK	BRL	0.02	0.013	65	0.02	0.013	65	0	35	52.5-152	
Methylene chloride	BRL	0.02	0.016	80	0.02	0.016	80	0	35	70.6-129	
Naphthalene	BRL	0.02	0.012	60	0.02	0.015	75	22.2	35	60.7-145	M9
n-Butylbenzene	BRL	0.02	0.018	90	0.02	0.017	85	5.7	35	66.5-136	
n-Propylbenzene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	73.3-126	
o-Xylene	BEL	0.02	0.018	90	0.02	0.018	90	0	35	71.6-130	
sec-Butylbenzene	BRL	0.02	0.018	90	0.02	0.017	85	5.7	35	77.9-124	
Styrene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	71.1-131	
t-butylbenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	74.4-130	
Tetrachloroethylene	BRL	0.02	0.029	145	0.02	0.029	145	0	35	62.6-157	
Toluene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	73.3-127	
trans-1,2-Dichloroethylene	BRL	0.02	0.017	85	0.02	0.016	80	6.1	35	70-130	
trans-1,3-Dichloropropene	BRL	0.02	0.015	75	0.02	0.015	75	0	35	71.5-124	
Trichloroethylene	BRL	0.02	0.017	85	0.02	0.017	85	0	35	69.2-133	
Trichlorofluoromethane	BRL	0.02	0.017	85	0.02	0.017	85	0	35	63.9-140	
Vinyl Chloride	BRL	0.02	0.015	75	0.02	0.015	75	0	35	40.9-159	
Xylenes	BRL	0.06	0.047	78.3	0.059	0.049	83.1	4.2	35	69.2-133	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE



Job ID : 14011206

Date : 2/7/2014

Analysis : Method : TX 1005 Reporting Units : mg/L

QC Batch ID : Qb14020412 Created Date : 02/04/14 Created By : AVBembde

Samples in This QC Batch : 14011206.02

Sample Preparation : PB14020408 Prep Method : TX 1005 Prep Date : 01/29/14 17:00 Prep By : AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	MQL	MDL	Qual
C6-C12	TPH-1005-1	< MDL	mg/L	1	1.5	0.66	
>C12-C28	TPH-1005-2	< MDL	mg/L	1	1.5	0.86	
>C28-C35	TPH-1005-4	< MDL	mg/L	1	1.5	0.75	
Total C6-C35		< MDL	mg/L	1	----		
1-Chlorooctane(surr)	111-85-3	94.8	%	1			
Chlorooctadecane(surr)	3386-33-2	94.4	%	1			

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	30	26.7	89	30	28.6	95.3	6.9	20	75-125	
>C12-C28	30	24.8	82.7	30	29.3	97.7	16.6	20	75-125	
>C28-C35	30	28.4	94.7	30	27.3	91	3.9	20	75-125	

QC Type: MS and MSD
QC Sample ID: 14011206.02

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	26.6	23.6	87	26.6	25.2	93	6.7	20	75-125	
>C12-C28	BRL	26.6	23.2	85.2	26.6	25.3	93.1	8.9	20	75-125	
>C28-C35	BRL	26.6	28.5	106	26.6	27.1	100	5.1	20	75-125	

Refer to the Definition page for terms.

LABORATORY TERM AND QUALIFIER DEFINITION REPORT



Job ID : 14011206

Date: 2/7/2014

General Term Definition

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

Qualifier Definition

L1	Associated LCS and/or LCSD recovery is above acceptance limits for flagged analyte. Bias may be high.
M1	Matrix Spike and/or Matrix Spike Duplicate recovery is above laboratory control limits due to matrix interference.
M9	Matrix Spike and/or Matrix Spike Duplicate recovery is below laboratory control limits.
Q18	Soils not collected in a hermetically sealed container may lose low-level VOCs.
R4	LCS/LCSD RPD exceeds control limit. Recovery meets acceptance criteria.
U	Undetected at SDL (Sample Detection Limit).
V6	CCV recovery is above the control limit for this analyte, however the average %difference for all the analytes meets method criteria.
V7	CCV recovery is below the control limit for this analyte, however the average %difference for all the analytes meets method criteria.

<p>1. REPORT TO: Company: <u>HVS Associates, Inc</u> Address: <u>61205 Daisy Ashford</u> <u>Houston, TX 77072</u> Contact: <u>Nie m. Ly</u> Phone: <u>281-983-8825</u> Fax: <input type="checkbox"/> E-mail: <input checked="" type="checkbox"/> <u>NLYC@HVS.COM</u></p>	<p>2. INVOICE TO: Company: Address: Contact: Phone: Fax: <input type="checkbox"/> E-mail: <input type="checkbox"/></p>	<p>3. PO # <u>1A-006AH</u> 3a. A&B Quote # 4. Turnaround Time (Business Days) <input type="checkbox"/> 1 Day* <input type="checkbox"/> Other: <input type="checkbox"/> 2 Days* *Surcharge applies <input type="checkbox"/> 3 Days* <input checked="" type="checkbox"/> 7 Days - Standard</p>																																																																																																																																														
<p>5. Project # <u>HE1214763</u> 6. Project Name/Location <u>EWPP Raw Water Line</u></p>	<p>7. Reporting Requirement: <input checked="" type="checkbox"/> TRRP Limits only <input type="checkbox"/> TRRP Rpt. Package <input type="checkbox"/> See Attached <input type="checkbox"/> Standard Level II <input type="checkbox"/> PST <input type="checkbox"/> MDL <input type="checkbox"/> EDD</p>	<p>8. Sampler's Name & Company (PLEASE PRINT) <u>Nie m Ly + HVS Associates, Inc</u> Sampler's Signature & Date <u>Nie m Ly</u> <u>1/29/14</u></p>	<p>9. Sample ID and Description</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">Sample ID and Description</th> <th colspan="2">10. Sampling</th> <th colspan="7">11, 12. Matrix</th> </tr> <tr> <th>Date</th> <th>Time 24hr</th> <th>Comp.</th> <th>Grab</th> <th>Water</th> <th>Soil</th> <th>Sludge</th> <th>Oil</th> <th>Drinking Water</th> <th>Air</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td></td> <td><u>DAB EB 6 (12-13)</u></td> <td><u>1/29/14</u></td> <td><u>10:15</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DAF EB 6</u></td> <td><u>"</u></td> <td><u>10:25</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DSAB EB 5 (15-16)</u></td> <td><u>"</u></td> <td><u>11:00</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DSAB EB 4 (22-23)</u></td> <td><u>"</u></td> <td><u>11:30</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DSAB EB 1 (17-18)</u></td> <td><u>"</u></td> <td><u>1:00</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DSAB EB 2 (7-8)</u></td> <td><u>"</u></td> <td><u>1:20</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td><u>DSAB EB 3 (22-23)</u></td> <td><u>"</u></td> <td><u>2:45</u></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	LAB USE ONLY	Sample ID and Description	10. Sampling		11, 12. Matrix							Date	Time 24hr	Comp.	Grab	Water	Soil	Sludge	Oil	Drinking Water	Air	Other		<u>DAB EB 6 (12-13)</u>	<u>1/29/14</u>	<u>10:15</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DAF EB 6</u>	<u>"</u>	<u>10:25</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DSAB EB 5 (15-16)</u>	<u>"</u>	<u>11:00</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DSAB EB 4 (22-23)</u>	<u>"</u>	<u>11:30</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DSAB EB 1 (17-18)</u>	<u>"</u>	<u>1:00</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DSAB EB 2 (7-8)</u>	<u>"</u>	<u>1:20</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>											<u>DSAB EB 3 (22-23)</u>	<u>"</u>	<u>2:45</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>									
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<p>19. RELINQUISHED BY <u>Nie m Ly</u></p>	<p>20. RECEIVED BY </p>	<p>DATE TIME</p> <p><u>1/29/14</u> <u>1533</u></p>	<p>DATE TIME</p> <p><u>125.14</u> <u>1533</u></p>																																																																																																																																													
<p>METHOD OF SHIPMENT *Containers: VOA - 40 ml vial A/G - Amber/Glass 1 Liter 4 oz/8 oz - glass wide mouth P/O - Plastic/other</p>		<p>21. KNOWN HAZARDS/COMMENTS</p> <p>Temperature: <u>17.0</u> Thermometer ID: <u>151002320</u> Intact Y or N: <u>Y</u> Initials: <u>ML</u></p>																																																																																																																																														
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Sample Condition Checklist

A&B JobID : 14011206	Date Received : 01/29/2014	Time Received : 3:33PM	
Client Name : HVJ Associates			
Temperature : 1.7°C	Sample pH : N/A		
Thermometer ID : 102002320	pH Paper ID : N/A		
Check Points			
	Yes	No	N/A
1. Cooler seal present and signed.		X	
2. Sample(s) in a cooler.	X		
3. If yes, ice in cooler.	X		
4. Sample(s) received with chain-of-custody.	X		
5. C-O-C signed and dated.	X		
6. Sample(s) received with signed sample custody seal.		X	
7. Sample containers arrived intact. (If no comment).	X		
8. Matrix	Water	Soil	Liquid
	Sludge	Solid	Cassette
	Tube	Bulk	Badge
	Food	Other	
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Sample(s) were received in appropriate container(s).	X		
10. Sample(s) were received with proper preservative	X		
11. All samples were logged or labeled.	X		
12. Sample ID labels match C-O-C ID's	X		
13. Bottle count on C-O-C matches bottles found.	X		
14. Sample volume is sufficient for analyses requested.	X		
15. Samples were received within the hold time.	X		
16. VOA vials completely filled.	X		
17. Sample accepted.	X		
Comments : Include actions taken to resolve discrepancies/problem:			

Received by : Dlopez

Check in by/date : CCripe / 01/29/2014

APPENDIX D
WASTE DISPOSAL DOCUMENTATION



Requested Disposal Facility: 5113 McCarty Road LF TX	Waste Profile #
	Sales Rep #.

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: HVJ Associates, Inc.			
Generator Site Address: 2300 Federal Road			
City: Houston	County: Harris	State: Texas	Zip: 77015
State ID/Reg No: CESQG	State Approval/Waste Code: CESQ3192	(if applicable)	NAICS # : NA
Generator Mailing Address (if different): 6120 S. Dairy Ashford			
City: Houston	County: Harris	State: Texas	Zip: 77072
Generator Contact Name: Niem Ly		Email: NLy@HVJ.com	
Phone Number: (281) 983-8825	Ext:	Fax Number:	

IIa. Transporter Information

Transporter Name: USA Waste Transportation Services		Contact Name: Debbie Jorgensen	
Transporter Address: 10234 Lucore Street			
City: Houston	County: Harris	State: Texas	Zip: 77017
Phone Number: (713) 335-9750	Fax Number: (713) 425-6956	State Transportation Number: 86133	

IIb. Billing Information

Bill To: USA Environment, L.P. 2067-TD-H015		Contact Name: Debbie Jorgensen	
Billing Address: 10234 Lucore Street		Email: djorgensen@usaenviro.com	
City: Houston	State: Texas	Zip: 77017	Phone: (713) 335-9750

III. Waste Stream Information

Name of Waste: Soil	
Process Generating Waste: Used a geoprobe to take samples of the soil onsite for water line interconnection to determine if there are any contaminated areas prior to construction activities by the City of Houston	
Physical State: <input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID	
Method of Shipment: <input type="checkbox"/> BULK <input checked="" type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:	
Estimated Annual Volume: 1 Drums	
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ANNUAL	
Disposal Consideration: <input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION	

IV. Representative Sample Certification

NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input checked="" type="checkbox"/> YES or <input type="checkbox"/> NO
Sample Date: 1/29/14	Type of Sample: <input checked="" type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE
Sample ID Numbers: EB-6, EB-5, EB -4, EB-1, EB-2 and EB-3	



Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components		% by Weight (range)			
1. Soil		100.000			
2.					
3.					
4.					
5.					
Color Brown	Odor (describe) none	Does Waste Contain Free Liquids? <input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No	% Solids 100.00	pH: NA	Flash Point >200 °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and it epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm) [reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD-like facility or waste consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither I nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Ed Hawkinson/Project Manager

HVJ and Associates

Authorized Representative Name/ Title (Type or Print)

Company Name

02/13/2014

Authorized Representative Signature

Date



NON-HAZARDOUS WASTE MANIFEST

0981230

Please print or type

1. Generator's US EPA ID Number		Manifest Document Number		2. Page 1 of	
3. Generator's Name and Mailing Address HVJ Associates, Inc. 2300 Federal Rd Houston, TX 77015				5. Generating Location (if different) SAME	
4. Phone () 281-983-8825		6. Phone ()		9. Transporter #1's Phone 713-425-6900	
7. Transporter #1 Company Name USA Waste Transportation Services			8. US EPA ID Number TXR000032045		
10. Transporter #2 Company Name			11. US EPA ID Number		12. Transporter #2's Phone
13. Designated T/S/D Facility Name and Site Address MC CARTY ROAD LF TX, LP #261A 11013 OLD BEAUMONT HWY HOUSTON, TX 77078			14. US EPA ID Number		15. Facility's Phone 713-671-1550
16. Waste Shipping Name and Description		17. Allied Waste Approval # and Exp. Date		18. Containers	
a. Soil Cuttings		5113142495 CESQ3192		19. Total Quantity	
				20. Unit Wt/Vol	
b.				No. Type	
c.				DM P	
d.					
21. Additional Descriptions for Materials Listed Above 2067-TD-H015					
22. Special Handling Instructions and Additional Information					
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.					
Printed/Typed Name David Holliman			Signature David Holliman		
			Month Day Year 2 20 14		
24. Transporter #1: Acknowledgement of Receipt of Materials					
Printed/Typed Name L. D. Moore Hutch			Signature L. D. Moore Hutch		
			Month Day Year 2 20 14		
25. Transporter #2: Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		
			Month Day Year		
26. Discrepancy Indication Space					
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)					
Printed/Typed Name			Signature		
			Month Day Year		

GENERATOR

TRANSPORTER

T/S/D FACILITY

GENERATOR'S COPY

COM000033