FINAL REPORT
LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT
PROPOSED SILBER ROAD PAVING AND DRAINAGE IMPROVEMENTS
I-10 TO HARTLAND STREET
CITY OF HOUSTON, TEXAS
WBS NO.: N-000812-0001-3

PROJECT NO. 13-965E

TO

MIDTOWN ENGINEERS, LLC
HOUSTON, TEXAS

BY

GEOTECH ENGINEERING AND TESTING

SERVICING

TEXAS, LOUISIANA, NEW MEXICO, OKLAHOMA

www.geotecheng.com

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TEXAS BOARD OF PROFESSIONAL ENGINEERS
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GEOTECH ENGINEERING and TESTING

Geotechnical, Environmental, Construction Materials, and Forensic Engineering

ACCREDITED

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Project No. 13-965E
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Gentlemen:

Submitted here is the report of Geotech Engineering and Testing (GET) limited phase II Environmental Site Assessment (ESA) study for the above-referenced project. This study was performed in general accordance with GET Proposal No. P13-278, Revision III, dated March 24, 2014 and was authorized by a Notice-to-Proceed from Midtown Engineers, LLC. dated April 21, 2014.

This report presents the results of our field exploration, together with the limited chemical laboratory testing analysis on selected soil samples and groundwater.

We appreciate the opportunity to be of service. Should you have any questions or need additional assistance, please call.

Very truly yours,

GEOTECH ENGINEERING AND TESTING
TBPE Registration Number F-001183

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TABLE OF CONTENTS

Page

ABBREVIATIONS 1

1.0 EXECUTIVE SUMMARY 2

2.0 INTRODUCTION 4

3.0 FIELD EXPLORATION 4
- 3.1 Drilling and Sampling 4
- 3.2 Photoionization Detector (PID) Field Testing 5
- 3.3 Groundwater Sampling 5
- 3.4 Borehole Grouting 5
- 3.5 Sample Disposal 6
- 3.6 Soil and Groundwater Samples 6

4.0 LABORATORY TESTS 6
- 4.1 Chemical Testing 6

5.0 GENERAL SOILS CONDITIONS 6
- 5.1 Site Conditions 6

6.0 ANALYSIS OF THE CHEMICAL TESTS 6
- 6.1 General 6
- 6.2 Results of the Limited Chemical Tests 8
  - 6.2.1 Total Petroleum Hydrocarbons (TPHs) 8
  - 6.2.2 Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) 9
  - 6.2.5 Volatile Organic Compounds (VOCs) 9
  - 6.2.4 Resource Conservation and Recovery Act (RCRA) Metals 10

7.0 CONCLUSIONS 11

8.0 RECOMMENDATIONS 12

9.0 QUALIFICATION OF ENVIRONMENTAL PROFESSIONALS 12

10.0 LIMITATIONS 12

11.0 STANDARD OF CARE 13

12.0 REPORT DISTRIBUTION 13

ILLUSTRATIONS

	PLATE
Site Vicinity Map	1
Boring Locations and Depths	2
Plan of Borings/Corings	3 – 5

Appendix A – Logs of Borings
Key to Logs Term and Symbols

Appendix B – Results of Limited Chemical Testing by A & B Labs with Chain of Custody Records

Appendix C – Project Site Pictures

Appendix D – Waste Disposal Manifest

Appendix E – Qualifications of Environmental Professionals

ABBREVIATIONS

AOC	Area of Concern
APAR	Affected Property Assessment Report
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
COCs or COC	Chemicals of Concern or Chemical of Concern
COH	City of Houston
ESA	Environmental Site Assessment
LPST	Leaking Petroleum Storage Tank
mg/kg	Miligrams per Kilogram. A measure of soils or sediment COC concentration. Could also be expressed as parts per million (ppm)
mg/L	Milligrams per Liter. A measure of groundwater COC concentration. Could also be expressed as parts per million (ppm)
MTBE	Methyl tert-Butyl Ether
ND	Not Detected at the Reporting Limit
OVA	Organic Vapor Analyzer
PAHs	Polycylic Aromatic Hydrocarbons
PCL	Protective Concentration Level
pH	A measure of a substance's acidity or alkalinity
PST	Petroleum Storage Tank. Could also be used as AST (Above-ground Storage Tank) or UST (Underground Storage Tank)
RCRA Metals	Resource Conservation and Recovery Act Metals
REC	Recognized Environmental Condition
SPLP	Synthetic Precipitation Leaching Procedure
TCEQ	Texas Commission on Environmental Quality
TMW	Temporary Monitoring Well
TPH	Total Petroleum Hydrocarbons
TRRP	Texas Risk Reduction Program
TSBC	Texas Specific Background Concentration
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

1.0 EXECUTIVE SUMMARY

It is planned for paving and drainage improvement to Silber Road from I-10 to Hartland Street in City of Houston, Texas. The total length of the project alignment is approximately ±2,100 ft. A site vicinity map is presented in Plate 1. Based on the results of our Phase I Environmental Site Assessment (GET Report No. 12-682E, dated November 06, 2013), sections of the project alignment along Silber Road has recognized environmental conditions (RECs). Therefore, a Limited Phase II Environmental Site Assessment Study (ESA) was conducted to estimate the presence of **hydrocarbon contamination** along the proposed paving and drainage improvement alignment near the Areas of Concern (AOC).

The purpose of our study was to determine the degree of petroleum hydrocarbons, volatile organic compounds, and Resource Conservation and Recovery Act (RCRA) metals in the subsoils and groundwater samples in the AOCs. The following is a summary of our limited phase II ESA study:

1. The subsoils and groundwater conditions were evaluated by conducting twelve (12) geoprobe borings to depths ranging from 18- to 21-ft below the existing grade along the proposed water line replacement alignment in the AOCs.

2. A Photoionization Dectector (PID) was used to estimate the degree of organic vapor contamination in the soils at the boring locations. **The PID tests results indicated readings ranging 1.2 ppm to 1107 ppm on the soil samples at Borings B-7 through B-10.**

3. The Geoprobe samples not used in the chemical testing were collected and stored inside 55-gallon drums at the GET facility. Since some of soil samples indicated recognizable readings during PID tests, the soil samples, not tested will be sent to a Hazardous landfill for disposal.

4. Selected soil and groundwater samples were tested for Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOC) and Resource Conservation and Recovery Act (RCRA) Metals analysis tests.

5. Our site investigation and field PID testing showed contamination of the soil samples at some of the boring locations in the AOCs. Based on the limited chemical testing analyses, all selected soil samples from the respective boring locations have TPH, BTEX and VOC concentrations below the Reporting Limit except Borings B-5 and B-8 through B-10. Our review of the RCRA metals analyses of the selected soil samples indicates presence of RCRA metals at all REC locations. Laboratory tests indicated that the concentration levels of RCRA metals at all REC locations are below the TCEQ regulatory guidance – TRRP, Tier-1 Industrial/Commercial Protective Concentration level (PCL), Exposure Pathways ${}^{Tot}Soil_{Comb}$ and ${}^{GW}Soil_{Ing}$ for a 0.5-Acre Source Area and Texas-Specific Soil Background Concentration Level.

6. Our limited chemical testing on the groundwater samples from the respective boring locations (Borings B-5, B-8 and B-10) have TPH and VOC concentrations above the Reporting limit. Chemical testing detected the presence of TPH in groundwater samples collected from Borings B-8 and B-10 (REC location No. 3 through 5) and VOC in groundwater samples collected from Borings B-5, B-8 and B-10. RCRA metal testing on groundwater samples collected from borings B-5 and B-10 indicates presence of Lead concentration of 0.036 mg/L and 0.044 mg/L which is higher than the PCL concentration for ${}^{GW}GW_{ing}$ (0.015 mg/L) but less than ${}^{GW}GW_{class}$ (1.5 mg/L).

7. **Due to presence of COCs in soils or groundwater samples collected from REC locations 2 through 5, the planned concentration areas in these areas along Silber Road from Shavelson Street to Northampton Street – Station 26+00 to Station 29+00 and from Northampton Street to Hartland Street – Station 29+00 to Station 33+00 should be declared as a Potentially Petroleum Contaminated Area (PPCA) in accordance with City of Houston Specification No 02105.**

8. Based on the laboratory analytical results, the COCs in soils samples are below the TCEQ regulatory guidance – TRRP, Tier-1 Industrial/Commercial Protective Concentration levels (PCLs), Exposure Pathways $^{Tot}Soil_{Comb}$ for a 0.5-Acre Source Area and therefore not a health concern to construction workers. <u>This does not mean that confined space protocols should not be employed, if such situations are encountered as part of the project.</u> Additionally, all PPCA should be handled in accordance with City of Houston's specifications Nos. 02120 and 02105.

9. **Please refer to the City of Houston's specifications Nos. 02120 and 02105 for additional details regarding the excavation, stockpile, dewatering and construction worker health and safety requirements.**

2.0 INTRODUCTION

2.1 General

It is planned for paving and drainage improvements to Silber Road from I-10 to Hartland Street in City of Houston, Texas. The total length of the project alignment is approximately ±2,100-ft. A site vicinity map is presented in Plate 1. Based on the results of our Phase I Environmental Site Assessment (GET Report No. 12-682E, dated November 06, 2013), sections of the project alignment along Silber Road has recognized environmental conditions (RECs). The results of our study indicated the following REC's along the project alignment:

REC Location	REC No.	Invert Depth of Utility, ft.
Silber Road, Cameron Iron Works Katy Plant – LPST Site located at 1000 Silber Road, Houston, TX. • Also listed as RCRA CESQG, AUL, VCP Site and Historical Auto Station Site.	1	13
Silber Road, Sunny's Food Express – LPST Site located at 1051 Silber Road, Houston, TX. • Also listed as UST/ Historical Auto Station Site.	2	16
Silber Road, Sigmor Shamrock 274 – LPST Site located at 1111 Silber Road, Houston, TX. • Also listed as UST/ Historical Auto Station Site.	3	16
Silber Road, A B Sanchez Texaco Service Station – Historical Auto Station Site located at 1107 Silber Road, Houston, TX.	4	16
Silber Road, Silber Road Chevron/Graham Gulf Service – Historical Auto Station Site located at 1103 Silber Road, Houston, TX. • Also listed as UST Site.	5	16

The purpose of our study was to determine the degree of petroleum hydrocarbons and volatile organic compounds and Resource Conservation and Recovery Act (RCRA) metals in the subsoils and groundwater in the AOCs.

3.0 FIELD EXPLORATION

3.1 Drilling and Sampling

We investigated potential contaminations of the subsoils by conducting twelve (12) Geoprobe borings to a completion depth of 18-ft to 21-ft in the AOCs. The existing pavement was cored prior to drilling and sampling. The depths of the borings are presented in Plate 2. The approximate boring locations are shown on the following table and Plates 3 through 5. The Geoprobe locations and number of borings are as follows:

Alignment	No. of Boring	Depth of Borings (ft)
Silber Road; I-10 and East of Enterprise Rent-A-Car (REC No. 1)	B-1 through B-3	18
Silber Road; Shavelson Street and Northampton Way (REC No. 2)	B-4 through B-6	21
Silber Road; Northampton Way to North of Hartland St. (REC No. 3 through No. 5)	B-7 through B-12	21

Since the borings were drilled in the paved areas pavement coring was performed prior to drilling and sampling. Soil samples were examined and classified in the field. This data is presented on the logs of borings on Plates A-1 through A-12 in Appendix A. A key to the log terms and symbols is given on Plate A-13 in Appendix A.

3.2 Photoionization Detector (PID) Field Testing

A photoionization Detector was used to estimate the degree of hydrocarbon contamination in the soils at the field. The PID machine indicated recognizable readings ranging 1.2 ppm to 1107 ppm of the soil samples at Borings B-7 through B-10. Soil samples were selected for further chemical tests based on the reading observed from PID tests. The PID field readings are presented on the boring logs in Appendix A.

Soil samples were obtained continuously at each boring location from the ground surface to the completion depth of the borings. Groundwater samples encountered at some of the boring locations were also collected using sump-pump for chemical analysis.

3.3 Groundwater Sampling

Groundwater was encountered at the boring locations B-5 and B-7 through B-10 along the project alignment. One of the soil boring in each REC location was converted into a temporary groundwater sampling well to collect groundwater samples for chemical analysis. A new one-inch PVC pipe with a slotted screen at the bottom of the pipe was installed as a temporary well casing to the full depth of the boring. A peristaltic pump and new plastic tubing was used to collect groundwater from the temporary wells. The groundwater samples were stored into a clean, laboratory provided sample container and kept in a cooler filled with ice.

3.4 Borehole Grouting

After completion of drilling and sampling, the boreholes were grouted using tremie method. All boreholes were grouted bottom up using Tremie pipe and concrete slurry. The pavement was patched with quickcrete. Pictures of our borehole grouting are shown in Appendix C of this report.

3.5 Sample Disposal

The Geoprobes samples, not used for testing were collected and stored inside 55-gallon drums at the GET facility. Since some of soil samples indicated readings ranging 1.2 ppm to 1107 ppm during PID tests, the soil samples will be sent to a Hazardous landfill for disposal. Waste disposal manifest is included in Appendix D.

3.6 Soil and Groundwater Samples

The soil and groundwater samples were placed in glass jars, labeled and placed in an ice-filled cooler. After chain of custody procedures was followed to maintain and document possession, the samples were transported to A&B Environmental Services, Inc. for limited chemical testing.

4.0 LABORATORY TESTS

4.1 Chemical Testing

Chemical tests were performed on selected soil and groundwater samples. The chemical tests consisted of Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Volatile Organic Compounds (VOC) and RCRA Metals analysis. A & B Labs performed these chemical analysis tests under a subcontract to GET. The test results are presented in Appendix B of this report.

5.0 GENERAL SOILS CONDITIONS

5.1 Site Conditions

The project location is along Silber Road in City of Houston, Texas. Currently, the project alignment is concrete paved.

In general, residential and commercial structures are located on both sides of the alignment. Project area pictures were taken during our field exploration. These pictures are presented in cover page and Appendix C.

6.0 ANALYSIS OF THE CHEMICAL TESTS

6.1 General

Laboratory tests were conducted on soils and groundwater samples obtained from the borings. The TPH, BTEX, VOC and RCRA Metals analyses were conducted on selected soil and groundwater samples to evaluate the subsoil and groundwater contamination at the boring locations. Our testing focused on analysis for petroleum hydrocarbons, VOC and RCRA metals on soils and groundwater. A list of selected soil and groundwater samples tested is as follows:

Borings No.	Depth Range, ft	Sample Matrix	Chemical Tests			
			TPH	BTEX	VOC	RCRA METALS
B-1	4 – 6	Soil	–	√	–	–
B-1	14 – 16	Soil	√	–	–	–
B-2	6 – 8	Soil	√	–	–	–
B-2	16 – 18	Soil	–	–	–	√
B-2	14 – 16	Soil	–	–	√	–
B-3	8 – 10	Soil	√	–	–	–
B-3	12 – 14	Soil	–	√	–	–
B-4	6 – 8	Soil	–	√	–	–
B-4	8 – 10	Soil	√	–	–	–
B-5	2 – 4	Soil	–	–	–	√
B-5	4 – 6	Soil	√	–	–	–
B-5	6 – 8	Soil	–	–	√	–
B-5	18	Water	√	–	√	√
B-6	2 – 4	Soil	–	√	–	–
B-6	8 – 10	Soil	√	–	–	–
B-7	4 – 6	Soil	–	√	–	–
B-7	18– 20	Soil	√	–	–	–
B-8	14 – 16	Soil	–	–	√	–
B-8	16 – 18	Soil	√	–	–	–
B-8	16 – 18	Soil	–	–	–	√
B-8	17	Water	√	–	√	–
B-9	8 – 10	Soil	√	–	–	–
B-9	18 – 20	Soil	–	√	–	–
B-10	0 – 2	Soil	√	–	–	–
B-10	16 – 18	Soil	–	–	√	–
B-10	17	Water	√	–	√	√
B-11	6 – 8	Soil	√	–	–	–
B-11	10 – 12	Soil	–	√	–	–
B-11	16 – 18	Soil	–	–	–	√
B-12	4 – 6	Soil	–	–	√	–
B-12	8 – 10	Soil	√	–	–	–

6.2 Results of the Limited Chemical Tests

Results of the limited chemical testing conducted by A & B Labs are presented in Appendix B of this report. A summary of the chemical test results on selected soils and groundwater samples are presented in following report sections.

6.2.1 Total Petroleum Hydrocarbons (TPHs)

TPH is a term used to describe several hundred chemical compounds that originally come from crude oil. TPHs analysis was conducted on twelve (12) soil samples and three (3) groundwater samples. Following is a summary of TPH concentrations:

Borings No.	Depth Range, ft	Sample Matrix	TPH, mg/kg		
			C6-C12	C12-C28	C28-35
B-1	14 – 16	Soil	BRL	BRL	BRL
B-2	6 – 8	Soil	BRL	BRL	BRL
B-3	8 – 10	Soil	BRL	BRL	BRL
B-4	8 – 10	Soil	BRL	BRL	BRL
B-5	4 – 6	Soil	BRL	BRL	BRL
B-6	8 – 10	Soil	BRL	BRL	BRL
B-7	18– 20	Soil	BRL	BRL	BRL
B-8	16 – 18	Soil	BRL	BRL	BRL
B-9	8 – 10	Soil	BRL	BRL	BRL
B-10	0 – 2	Soil	BRL	BRL	BRL
B-11	6 – 8	Soil	BRL	BRL	BRL
B-12	8 – 10	Soil	BRL	BRL	BRL

Borings No.	Depth, ft	Sample Matrix	TPH, mg/L		
			C6-C12	C12-C28	C28-35
B-5	18	Water	BRL	BRL	BRL
B-8	17	Water	54.6	4.4	BRL
B-10	17	Water	12.3	1.74	BRL

Notes: 1) Testing results were compared to TCEQ Regulatory Guidance – TRRP, Tier-1 Commercial/ Industrial Protective Concentration Levels (PCLs), Exposure Pathways ${}^{Tot}Soil_{Comb}$ and ${}^{GW}Soil_{Ing}$ and ${}^{GW}GW_{Ing}$ for a 0.5-Acre Source Area
2) BRL = Below Reporting Limit

Our review of the limited chemical testing analyses indicates that all selected soil samples at the boring locations have TPH concentration below the Reporting Limit. Limited chemical testing analysis of groundwater samples indicated that TPH concentration in groundwater samples is slightly higher than the PCLs recommended concentrations at borings B-8 and B-10.

6.2.2 Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)

BTEX is the term used for benzene, toluene, ethylbenzene and xylene typically found in petroleum products, such as gasoline and diesel fuel. BTEX compounds have the potential to move through soil and groundwater. This typically occurs near petroleum/natural gas production sites, service stations and other areas with Underground Storage Tanks (USTs) or Above-ground Storage Tanks (ASTs) containing gasoline or other petroleum-related products. BTEX analysis was conducted on seven (7) soil samples. The following is a summary of BTEX concentrations:

Borings No.	Depth Range, ft	Sample Matrix	BTEX, mg/kg			
			Benzene	Toluene	Ethylbenzene	Xylenes
B-1	4 – 6	Soil	BRL	BRL	BRL	BRL
B-3	12 – 14	Soil	BRL	BRL	BRL	BRL
B-4	6 – 8	Soil	BRL	BRL	BRL	BRL
B-6	2 – 4	Soil	BRL	BRL	BRL	BRL
B-7	4 – 6	Soil	BRL	BRL	BRL	BRL
B-9	18 – 20	Soil	1.35	23.15	14.3	74.05
B-11	10 – 12	Soil	BRL	BRL	BRL	BRL

Notes: 1) Testing results were compared to TCEQ Regulatory Guidance – TRRP, Tier-1 Commercial/ Industrial Protective Concentration Level (PCL), Exposure Pathways ${}^{Tot}Soil_{Comb}$, ${}^{GW}Soil_{Ing}$ and ${}^{GW}GW_{Ing}$ for a 0.5-Acre Source Area
2) BRL = Below Reporting Limit

Our review of the limited chemical testing analyses indicates that all selected soil samples at the boring locations have BTEX concentration below the Reporting Limit except the sample collected from Boring B-9. The BTEX concentration was higher compared to the PCLs recommended concentrations at this location.

6.2.5 Volatile Organic Compounds (VOCs)

VOCs are compounds that have a high vapor pressure and low water solubility. VOCs are often components of petroleum fuels, hydraulic fluids, paint thinners, and dry cleaning agents. VOCs are common groundwater contaminants. Therefore, VOCs analysis was conducted on five (5) soil samples and three (3) groundwater samples. The following is a summary of VOCs concentrations:

Borings No.	Depth Range, ft	Sample Matrix	VOCs, mg/L
B-2	14 – 16	Soil	BRL
B-5	6 – 8	Soil	0.042
B-8	14 – 16	Soil	24
B-10	16 – 18	Soil	37.8
B-12	4 – 6	Soil	BRL

Borings No.	Depth, ft	Sample Matrix	VOCs, mg/L
B-5	18	Water	0.0077
B-8	17	Water	49
B-10	17	Water	5.45

Our review of the limited chemical testing analyses on the soils samples indicates that soils at Borings B-2 and B-12 have VOC concentration below the Reporting Limit. The soil samples obtained at Borings B-5, B-8 and B-10 indicate VOC concentration significantly higher than the Reporting Limit. Limited chemical testing analysis of groundwater samples indicated that VOC concentration in groundwater samples is higher than the PCLs recommended concentrations at Borings B-5, B-8 and B-10.

6.2.4 Resource Conservation and Recovery Act (RCRA) Metals

Presence of metals in soils and groundwater regulated by Resources Conservation and Recovery Act (RCRA) were analyzed. Metals analyzed includes, arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. RCRA metals analysis was conducted on four (4) soil samples and two (2) groundwater samples. Our review of the RCRA metal analysis results are presented below. The following is a summary of RCRA metals concentrations:

Borings No.	Depth Range, ft	Sample Matrix	Total Recoverable Metals[1], mg/kg							
			Arsenic[2] 5.9	Barium[2] 300	Cadmium[3] 1.50	Chromium[2] 30	Lead[2] 15	Selenium[2] 0.3	Silver[3] 0.48	Mercury[2] 0.04
B-2	16 – 18	Soil	0.6	23.4	BRL	3.4	2.5	BRL	BRL	BRL
B-5	2 – 4	Soil	0.8	27.4	BRL	3.0	3.2	BRL	BRL	BRL
B-8	16 – 18	Soil	0.9	21.7	BRL	2.2	2.4	BRL	BRL	BRL
B-11	16 – 18	Soil	4.4	47.3	BRL	9.4	8.0	BRL	BRL	BRL

Borings No.	Depth Range, ft	Sample Matrix	Total Recoverable Metals[4], mg/L							
			Arsenic 0.01	Barium 2.0	Cadmium 0.005	Chromium 0.1	Lead 0.015	Selenium 0.05	Silver 0.12	Mercury 0.002
B-5	18	Water	BRL	0.253	BRL	0.027	0.036	BRL	BRL	BRL
B-10	17	Water	BRL	0.687	BRL	0.021	0.044	BRL	BRL	BRL

Notes: 1) Testing results were compared to TCEQ Regulatory Guidance – TRRP, Tier-1 Industrial/ Commerical Protective Concentration Levels (PCLs), Exposure Pathways $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ for a 0.5-Acre Source Area and Texas-Specific Soil Background Concentrations (Median Background Concentrations)
2) TX background (PCL reference)
3) $^{GW}Soil_{Ing}$ (TRRP, Tier-1- PCLs)
4) $^{GW}GW_{Ing}$ (TRRP, Tier-1- PCLs)

Our review of the RCRA metals analyses of the selected soil samples indicates presence of RCRA metals at all REC locations. Laboratory tests detected concentration levels of RCRA metals at all REC locations are below the TCEQ regulatory guidance – TRRP, Tier-1 Industrial/Commercial Protective Concentration levels (PCLs), Exposure Pathways $^{Tot}Soil_{Comb}$ and $^{GW}Soil_{Ing}$ for a 0.5-Acre Source Area and Texas-Specific Soil Background Concentration Level.

RCRA metal testing on groundwater samples collected from Borings B-5 and B-10 indicates presence of Lead concentration of 0.036 mg/L and 0.044 mg/L which is higher than the PCL recommended concentration for $^{GW}GW_{ing}$ (0.015 mg/L) but less than $^{GW}GW_{class}$ (1.5 mg/L).

7.0 CONCLUSIONS

- Our site investigation and field PID testing showed contamination of the soil samples at Borings B-7 through B-10. Based on the limited chemical analyses, selected soil samples from the respective boring locations have TPH concentrations below the Reporting Limit. BTEX test results indicate that the selected soil samples have BTEX concentration below Reporting Limit except Boring B-9. The VOC test results indicate significant VOC concentration in selected soils samples at Borings B-5, B-8 and B-10. Our review of the RCRA metals analyses of the selected soil samples indicates presence of RCRA metals at all REC locations. Laboratory tests detected concentration levels of RCRA metals at all REC locationsis below the Texas-Specific Soil Background Concentrations.

- Our limited chemical testing on the groundwater samples from the respective boring locations (Borings B-5, B-8 and B-10) indicated significant TPH and VOC concentrations above the Reporting limit. Furthermore, chemical testing detected the presence of TPH in groundwater samples collected from Borings B-8 and B-10 (REC location No. 3 through 5) and VOC in groundwater samples collected from Borings B-5, B-8 and B-10. RCRA metal testing on groundwater samples collected from borings B-5 and B-10 indicates presence of Lead concentration of 0.036 mg/L and 0.044 mg/L which is higher than the PCL recommended concentration for $^{GW}GW_{ing}$ (0.015 mg/L) but less than $^{GW}GW_{class}$ (1.5 mg/L).

- **Due to presence of COCs in soils or groundwater samples collected from REC locations 2 through 5, the planned concentration areas in these areas along Silber Road from Shavelson Street to Northampton Street – Station 26+00 to Station 29+00 and from Northampton Street to Hartland Street – Station 29+00 to Station 33+00 should be declared as a Potentially Petroleum Contaminated Area (PPCA) in accordance with The City of Houston Specification No 02105.**

- Based on the laboratory analytical results, the COCs in soils samples are below the TCEQ regulatory guidance – TRRP, Tier-1 Industrial/Commercial Protective Concentration levels (PCLs), Exposure Pathways $^{Tot}Soil_{Comb}$ for a 0.5-Acre Source Area and therefore not a health concern to construction workers. This does not mean that confined space protocols should not be employed, if such situations are encountered as part of the project. Additionally, all PPCA should be handled in accordance with City of Houston's specifications Nos. 02120 and 02105.

- **Please refer to the City of Houston's specifications Nos. 02120 and 02105 for additional details regarding the excavation, stockpile, dewatering and construction worker health and safety requirements.**

8.0 RECOMMENDATIONS

- PPCA should be handled in accordance with the City of Houston Specifications (Section 02105 and 02120).

- Appropriate measures, such as petroleum resistant pipping and gaskets, should be used in design and construction of water line within the PPCA to prevent possible infiltration of the contaminants into the proposed water line, in accordance with the City of Houston Specifications (Section 02105)

- All workers working in PPCA must have appropriate training as specified by the Occupational Safety and Health Administration (OSHA) in 29 CFR 1910.120. Before beginning work in the PPCA, all workers are required to complete 40 hours OSHA health and safety training.

- Potential media screening, testing, handling and disposal in the PPCA should be in accordance with the City of Houston Specifications (Section 02105 and 02120).

9.0 QUALIFICATION OF ENVIRONMENTAL PROFESSIONALS

The GET team includes personnel from a variety of environmental disciplines. Key personnel involved in this project included the following:

- Yongwan (Alex) Kwon, P.E. – Engineering Manager

- Rick Manzur, Ph.D., E.I.T. – Project Manager

Detail information about the qualifications of environmental professionals is shown in Appendix E.

10.0 LIMITATIONS

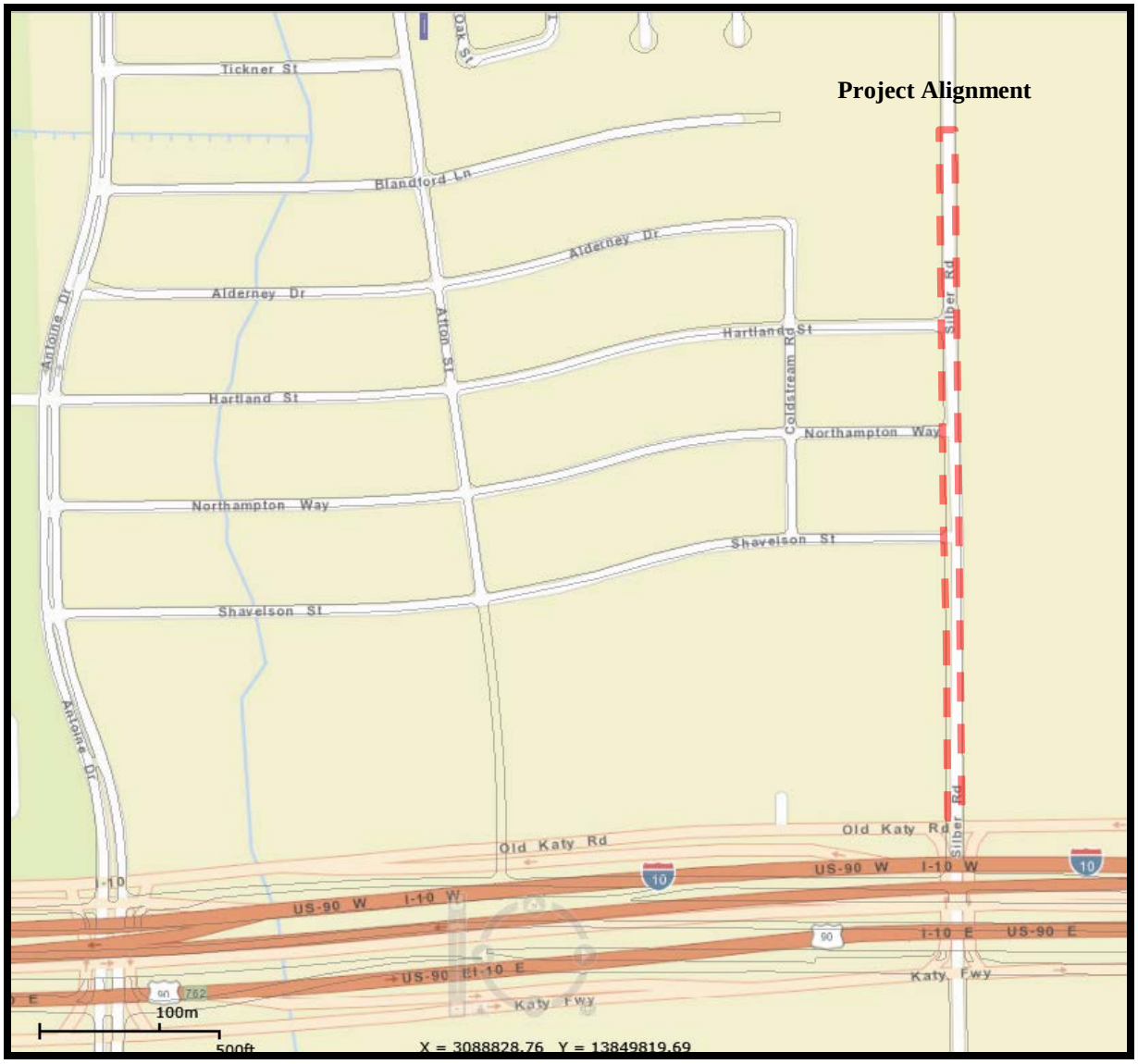
The conclusions developed in this limited study were based on field and laboratory data taken at specific on-site locations and the selected samples tested. The tested results only represent the limited soils conditions at the boring locations. Variations and contamination could exist on the site where the soils borings and chemical testing were not performed in this study.

11.0 STANDARD OF CARE

The recommendations described herein were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the engineering profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty or guarantee, expressed or implied, is made other than the work was performed in a proper and workmanlike manner.

12.0 REPORT DISTRIBUTION

This report was prepared for the sole and exclusive use by our client, based on specific and limited objectives. The report, boring logs, field data, laboratory test results, maps and other documents prepared by GET as instruments of service shall remain the property of GET. Reuse of these documents is not permitted without written approval by GET. GET assumes no responsibility or obligation for the unauthorized use of this report by other parties and for purposes beyond the stated project objectives and work limitations.



SITE VICINITY MAP

PROJECT: Limited Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street
WBS No. N-000812-0001-3, City of Houston, Texas

SCALE: 1 inch = 500 ft	DATE: DECEMBER 2014	PROJECT NO.: 13-965E

NORTH

BORING NUMBERS AND DEPTHS

Phase II Environmental Site Assessment (ESA) for Proposed Silber Road Paving and Drainage Improvements WBS No. N-000812-0001-3, City of Houston, Texas

Boring No.	Invert Depth of Utilities (ft)	Boring Depth (ft.)
B-1	13	18
B-2	13	18
B-3	13	18
B-4	16	21
B-5	16	21
B-6	16	21
B-7	15.5	21
B-8	15.5	21
B-9	15.5	21
B-10	15.5	21
B-11	15.5	21
B-12	15.5	21

PLAN OF BORINGS (boring dimensions and locations are approximate)

PROJECT: Limited Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street
WBS No. N-000812-0001-3, City of Houston, Texas

SCALE: NOT TO SCALE	DATE: DECEMBER 2014	PROJECT NO.: 13-965E

NORTH

PLAN OF BORINGS (boring dimensions and locations are approximate)

PROJECT: Limited Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street
WBS No. N-000812-0001-3, City of Houston, Texas

SCALE: NOT TO SCALE	DATE: DECEMBER 2014	PROJECT NO.: 13-965E

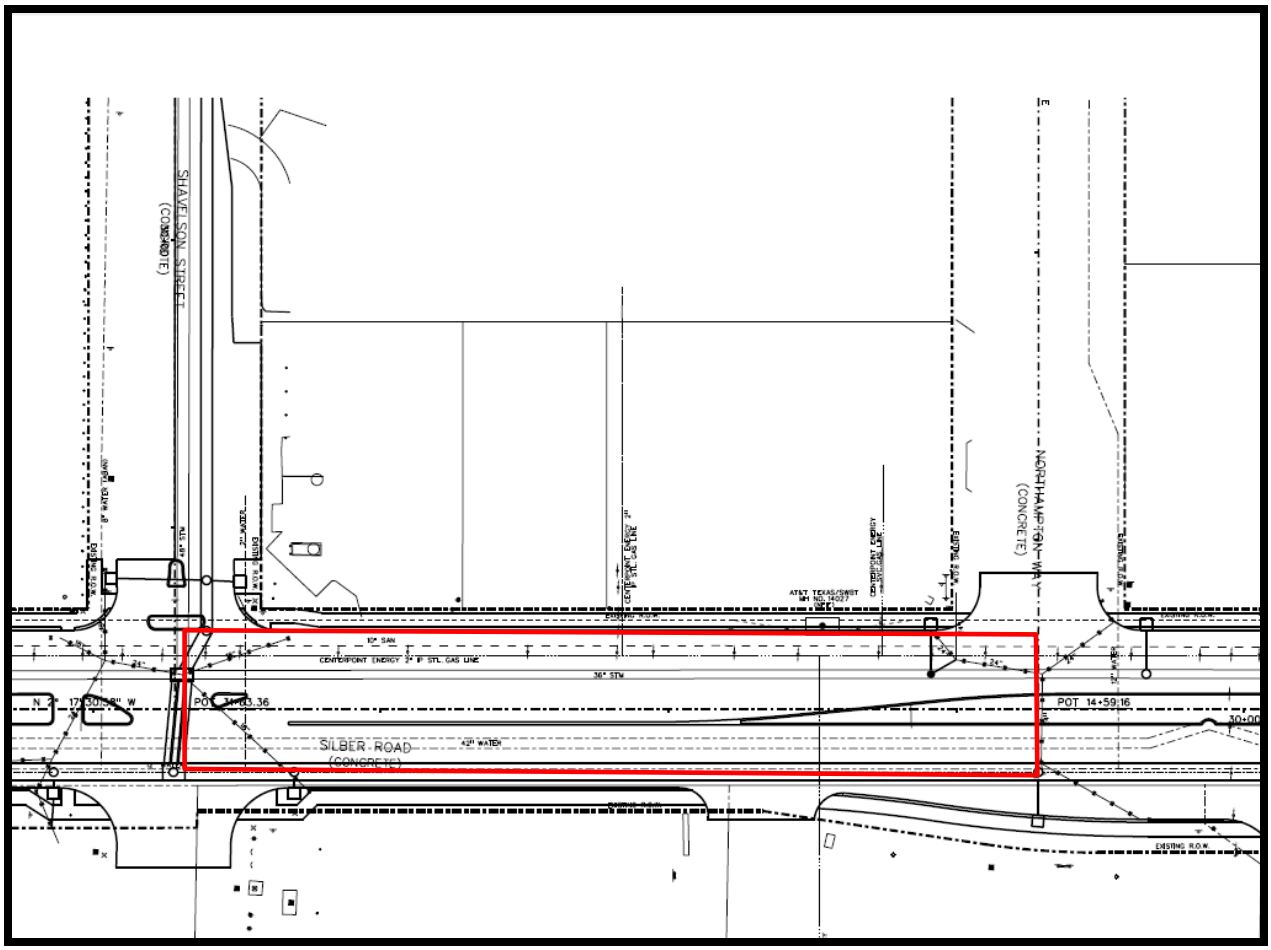
NORTH

PLAN OF BORINGS (boring dimensions and locations are approximate)

PROJECT: Limited Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street
WBS No. N-000812-0001-3, City of Houston, Texas

SCALE: NOT TO SCALE	DATE: DECEMBER 2014	PROJECT NO.: 13-965E

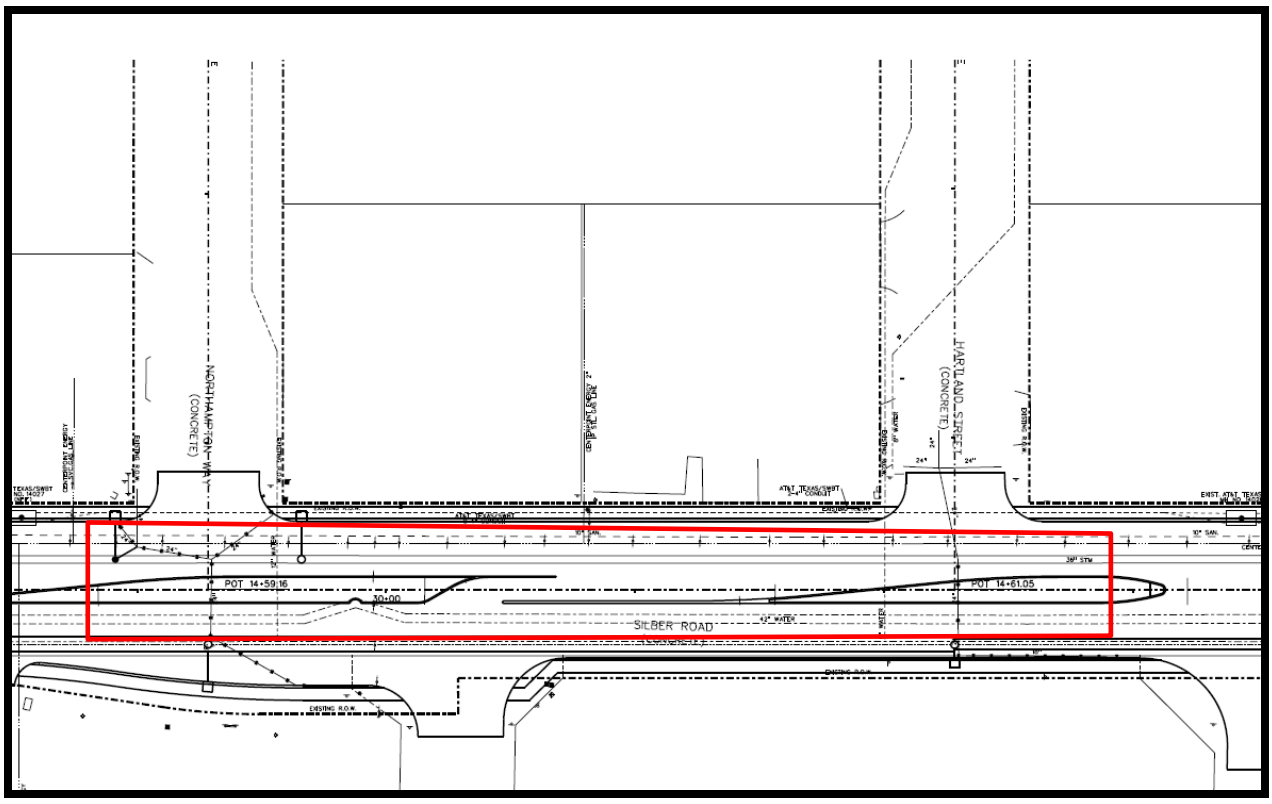
NORTH



PPCA Alignment

Along Silber Road – From Shavelson Street to Northampton Street – Station 26+00 to Station 29+00

PPCA Along Silber Road from Shavelson Street to Northampton Street		
PROJECT: Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street WBS No. N-000812-0001-3, City of Houston, Texas		NORTH
SCALE: NOT TO SCALE	DATE: DECEMBER 2014	REPORT NO.: 13-965E



PPCA

Along Silber Road – From Northampton Street to Hartland Street – Station 29+00 to Station 33+00

PPCA Along Silber Road – From Northampton Street to Hartland Street			NORTH
PROJECT: Phase II Environmental Site Assessment, Silber Road from I-10 to Hartland Street WBS No. N-000812-0001-3, City of Houston, Texas			
SCALE: NOT TO SCALE	DATE: DECEMBER 2014	REPORT NO.: 13-965E	

APPENDIX A

Log of Borings
Key to Log Terms & Symbols

LOG OF BORING NO. B-1

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-3-14 COMPLETION DEPTH: 18.0 ft.

ELEVATION: Existing Grade

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 0.5, 1.0, 1.5, 2.0, 2.5)
0					PAVEMENT THICKNESS (15.8")										
		0			LEAN CALY (CL), dark gray, dark brown, with ferrous and calcareous nodules, sands										
		0			- brownish yellow 4' to 12'										
5		1.8													
		0													
		0													
10					- light gray 10' to 12'										
		0.2													
		0.3			SILTY SAND (SM), light brown, light gray, with clay pokcets										
					- brownish yellow 14' to 18'										
15		1.6													
		1.2													
20															
25															

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-2

GEOTECH ENGINEERING & TESTING
Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-3-14 COMPLETION DEPTH: 18.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 0.5, 1.0, 1.5, 2.0, 2.5)
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (15")										
		0			LEAN CALY (CL), dark gray, dark brown, with ferrous and calcareous nodules, sands										
		0			- reddish brown 2' to 12'										
5		0.2													
		0.6													
					- brownish yellow 8' to 12'										
		0.1													
10															
		0													
					SILTY SAND (SM), light brown, brownish yellow, with clay pokcets										
		0.8													
15		0.8													
					- light gray 16" to 18'										
		0.6													
20															
25															

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-3

GEOTECH ENGINEERING & TESTING
Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-3-14 COMPLETION DEPTH: 18.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 0.5 1.0 1.5 2.0 2.5
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (9")										
		0			LEAN CLAY (CL), dark gray, dark brown, with ferrous and calcareous nodules, sands										
		0													
					- reddish brown 4' to 8'										
5		0.1													
		0.1													
					- light brown 8' ro 12'										
		0.4													
10		0.4													
		0.2			SILTY SAND (SM), light gray, light brown, with clay pockets										
15		0.1													
		0.1													
20															
25															

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-4

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 0.5 1.0 1.5 2.0 2.5
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (7.8")										
		0.1			LEAN CLAY (CL), dark brown, with ferrous and calcareous nodules, moist										
		0.1													
5		0													
		0.6													
					- reddish brown 8' to 12'										
		0.2													
10															
		0.5													
					SILTYB SAND (SM), light brown, light gray, with clay pockets										
		0.1													
15		0.1													
					- brownish yellow 16' to 21'										
		0													
		0													
20		0													
25															

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-5

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION
					ELEVATION: Existing Grade
0					PAVEMENT THICKNESS (7.8")
		0			LEAN CLAY (CL), light brown, light gray, sands
		0.1			SILTY SAND (SM), dark brown, light brown, with clay pcoekts
5		2.8			
		6.3			- reddish brown 6' to 8'
		2.6			LEAN CLAY (CL), light brown, light gray, with ferrous and calcareous nodules
10		1			
		0.8			- dark brown, reddish brown 12' to 16'
15		0.8			
		0.6			SILTY SAND (SM), dark brown, light brown, with clay pockets
		0.4			
20		0.6			
25					

NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)

UNDRAINED SHEAR STRENGTH, tsf
▲ HAND PENETROMETER
■ TORVANE
● UNCONFINED COMPRESSION
○ UNCONSOLIDATED-UNDRAINED TRIAXIAL
0.5 1.0 1.5 2.0 2.5

WATER OBSERVATIONS:
▽ : WATER ENCOUNTERED AT 18.0 ft. DURING DRILLING
▼ : WATER DEPTH AT 18.0 ft. AFTER 0.33-HOUR

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-6

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)
					ELEVATION: Existing Grade									
0					PAVEMENT THICKNESS (7.2")									
		0			SILTY SAND (SM), light brown, light gray, with clay pockets									
		0			LEAN CLAY (CL), dark brown, light brown, with ferrous and calcareous nodules, sands									
5		0			SILTY SAND (SM), light brown, light gray, with clay pockets									
		0			- reddish brown 8' to 12'									
10		0.2												
		0.1												
		0.1			LEAN CLAY (CL), reddish brown, light brown, sands - light gray 14' to 21'									
15		0.2												
		0												
		0												
20		0												
25														

UNDRAINED SHEAR STRENGTH, tsf
▲ HAND PENETROMETER
■ TORVANE
● UNCONFINED COMPRESSION
○ UNCONSOLIDATED-UNDRAINED TRIAXIAL
0.5 1.0 1.5 2.0 2.5

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-7

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-3-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 0.5 1.0 1.5 2.0 2.5
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (8.6")										
		0.1			LEAN CLAY (CL), dark brown, brownish yellow, with ferrous and calcareous nodules, sands										
		0.1													
5		0.3													
		0.4													
					- light brown, light gray 8' to 12'										
		0													
10		0													
		4.8			SILTY SAND (SM), light gray, brown, with clay pockets										
15		9.1													
					- dark brown 16' to 21'										
		18													
		26													
20		16													
25															

WATER OBSERVATIONS:
▽ : WATER ENCOUNTERED AT 20.0 ft. DURING DRILLING
▼ : WATER DEPTH AT 20.0 ft. AFTER 0.33-HOUR

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-8

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-3-14 COMPLETION DEPTH: 21.0 ft.

ELEVATION: Existing Grade

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 0.5 1.0 1.5 2.0 2.5
0					PAVEMENT THICKNESS (8.2")										
		0.1			LEAN CLAY (CL), dark brown, brownish yellow, with ferrous nodules, sands										
		0.1													
5		0.2													
					- reddish brown, dark gray 6' to 12'										
		0.3													
		0.3													
10															
		0.3													
		1.2			SILTY SAND (SM), dark ngray, light brown, with clay pockets										
15		470													
					- light gray 16' to 21'										
▼		816													
		610													
20		644													
25															

WATER OBSERVATIONS:
▽ : WATER ENCOUNTERED AT 17.0 ft. DURING DRILLING
▼ : WATER DEPTH AT 17.0 ft. AFTER 0.33-HOUR

DRY AUGER: ___ TO ___ ft.
WET ROTARY: ___ TO ___ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-9

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)
					ELEVATION: Existing Grade									
0					PAVEMENT THICKNESS (7.2")									
		0.2			LEAN CLAY (CL), dark brwon, dark gray, with calcareous nodules, sands									
		0			- light brown, brownish yellow 4' to 6'									
5		0.2												
		0.1			SILTY SAND (SM), brownish yellow, light gray, with clay pockets									
		0.9			- dark gray 8' to 10'									
10		0.2			LEAN CLAY (CL), dark gray, gray, with ferrous nodules, sands									
		0.2			- dark brown 14' to 16'									
15		0.4												
		675			SILTY SAND (SM), dark gray, with clay pockets									
		710												
20		180												
25														

UNDRAINED SHEAR STRENGTH, tsf
▲ HAND PENETROMETER
▮ TORVANE
● UNCONFINED COMPRESSION
○ UNCONSOLIDATED-UNDRAINED TRIAXIAL
0.5 1.0 1.5 2.0 2.5

WATER OBSERVATIONS:
▽: WATER ENCOUNTERED AT 17.0 ft. DURING DRILLING
▼: WATER DEPTH AT 17.0 ft. AFTER 0.33-HOUR

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-10

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL) 0.5 1.0 1.5 2.0 2.5
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (6.9")										
		0.6			LEAN CLAY (CL), dark brwon, brownish yellow, with ferrous nodules, sands										
		0.1													
5		0.2													
					SILTY SAND (SM), light gray, dark gray, with clay pockets - dark gray 6' to 14'										
		0.1													
		0.2													
10					- light gray 10' to 14'										
		0.1													
		0													
15		0.1													
		1107													
		609													
20		302													
25															

WATER OBSERVATIONS:
▽ : WATER ENCOUNTERED AT 17.0 ft. DURING DRILLING
▼ : WATER DEPTH AT 17.0 ft. AFTER 0.33-HOUR

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-11

Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

ELEVATION: Existing Grade

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION
0					PAVEMENT THICKNESS (6.8")
		0			SANDY SILT (ML), dark gray, dark brown, with clay pockets
		0.1			
5		0.4			LEAN CLAY (CL), dark brown, brownish yellow, with ferrous nodules, sands
		0.4			- light gray 6' to 12'
		0.4			
10		0.1			
		0.2			SILTY SAND (SM), light brown, brownish yellow, with clay pockets
15		0.1			
		0.1			- dark gray 16' to 21'
		0.1			
20		0			
25					

NATURAL MOISTURE CONTENT, % | LIQUID LIMIT, % | PLASTIC LIMIT, % | PLASTICITY INDEX, % | PERCENT PASSING NO. 200 SIEVE | SUCTION (pF) | DRY UNIT WEIGHT, pcf | PERCENT COMPACTION | PASSING/FAILING (P/F)

UNDRAINED SHEAR STRENGTH, tsf
▲ HAND PENETROMETER
▮ TORVANE
● UNCONFINED COMPRESSION
○ UNCONSOLIDATED-UNDRAINED TRIAXIAL
0.5 1.0 1.5 2.0 2.5

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

LOG OF BORING NO. B-12

GEOTECH ENGINEERING & TESTING
Geotech Engineering and Testing
800 Victoria Drive
Houston, Texas 77022
Phone: 713-699-4000 Fax: 713-699-9200

PROJECT: Limited Phase II ESA at Silber Road Area
LOCATION: City of Houston, Texas
WBS NO.: N-000812-0001-3 STATION NO.:
DATE: 6-2-14 COMPLETION DEPTH: 21.0 ft.

DEPTH, ft	SPT N-VALUE blows per foot	OVM, ppm	SYMBOL	SAMPLES	DESCRIPTION	NATURAL MOISTURE CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	PLASTICITY INDEX, %	PERCENT PASSING NO. 200 SIEVE	SUCTION (pF)	DRY UNIT WEIGHT, pcf	PERCENT COMPACTION	PASSING/FAILING (P/F)	UNDRAINED SHEAR STRENGTH, tsf (▲ HAND PENETROMETER, ■ TORVANE, ● UNCONFINED COMPRESSION, ○ UNCONSOLIDATED-UNDRAINED TRIAXIAL; 0.5, 1.0, 1.5, 2.0, 2.5)
					ELEVATION: Existing Grade										
0					PAVEMENT THICKNESS (8.2")										
		0			SILTY SAND (SM), darkbrown, light gray, with clay pockets										
		0.1			- brown 2' to 6'										
5		0.2													
		0.1			LEAN CLAY (CL), brownish yellow, dark brown, with ferrous nodules, sand seams										
		0.1													
10					- gray 10' to 14'										
		0.1													
		0.1													
15		0			SILTY SAND (SM), light brown, light gray, with clay pockets										
		0													
					- dark gray 18' to 21'										
		0													
20		0													
25															

WATER OBSERVATIONS:
NO FREE WATER ENCOUNTERED DURING DRILLING

DRY AUGER: ____ TO ____ ft.
WET ROTARY: ____ TO ____ ft.

DRILLED BY: TM (Gp)
LOGGED BY: Rick

OVM2 13-965E.GPJ OVM.GDT 6/28/14

KEY TO LOG TERMS AND SYMBOLS

UNIFIED SOIL CLASSIFICATIONS

Symbol	Material Descriptions
GW	WELL GRADED-GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES
GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL-SAND SILT MIXTURES
GC	CLAY GRAVELS, GRAVEL-SAND CLAY MIXTURES
SW	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SP	POORLY GRADED SANDS, OR GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY SANDS, SAND-SILT MIXTURES a
SC	CLAYEY SANDS, SAND-SILT MIXTURES b
ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, LEAN CLAYS
OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENT
	FILL SOILS

TERMS CHARACTERIZING SOIL STRUCTURE

Slickensided	-	Having incline planes of weakness that are slick and glossy in appearance.
Fissured	-	Containing shrinkage cracks frequently filled with fine sand or silt: usually vertical.
Laminated	-	Composed of thin layers of varying colors and soil sample texture.
Interbedded	-	Composed of alternate layers of different soil types.
Calcareous	-	Containing appreciable quantities of calcium carbonate.
Well Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes.
Poorly Graded	-	Predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.
Pocket	-	Inclusion of material of different texture that is smaller than the diameter of the sample.
Parting	-	Inclusion less than ⅛-inch thick extending through the sample.
Seam	-	Inclusion ⅛- to 3-inch thick extending through the sample.
Layer	-	Inclusion greater than 3-inch thick extending through the sample.
Interlayered	-	Soils sample composed of alternating layers of different soil types.
Intermixed	-	Soil samples composed of pockets of different soil type and layered or laminated structure is not evident.

COARSE GRAINED SOILS (major portion retained on No. 200 Sieve): Includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Conditions rated according to standard penetration test (SPT)* as performed in the field.

Descriptive Terms	Blows Per Foot*
Very Loose	0 – 4
Loose	5 – 10
Medium Dense	11 – 30
Dense	31 – 50
Very Dense	over 50

* 140 pound weight having a free fall of 30-inch

FINE GRAINED SOILS (major portion passing No. 200 Sieve): Include (1) inorganic or organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength as indicated by hand penetrometer readings or by unconfined compression tests.

Descriptive Term	Undrained Shear Strength Ton/Sq. Ft.
Very Soft	Less than 0.13
Soft	0.13 to 0.25
Firm	0.25 to 0.50
Stiff	0.50 to 1.00
Very Stiff	1.00 to 2.00
Hard	2.00 or higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above because of weakness or cracks in the soil. The consistency ratings of such soils are based on hand penetrometer readings.

SOIL SAMPLERS

- SHELBY TUBE SAMPLER
- STANDARD PENETRATION TEST
- AUGER SAMPLING

TERMS CHARACTERIZING ROCK PROPERTIES

VERY SOFT OR PLASTIC	Can be remolded in hand: corresponds in consistency up to very stiff in soils.
SOFT	Can be scratched with fingernail.
MODERATELY HARD	Can be scratched easily with knife; cannot be scratched with fingernail. Difficult to scratch with knife.
VERY HARD	Cannot be scratched with knife.
POORLY CEMENTED OR FRIABLE	Easily crumbled.
CEMENTED	Bounded Together by chemically precipitated materials.
UNWEATHERED	Rock in its natural state before being exposed to atmospheric agents.
SLIGHTLY WEATHERED	Noted predominantly by color change with no disintegrated zones.
WEATHERED	Complete color change with zones of slightly decomposed rock.
EXTREMELY WEATHERED	Complete color change with consistency, texture, and general appearance or soil.

APPENDIX B

Results of Limited Chemical Testing by A & B Labs with Chain of Custody Records

Laboratory Analysis Report

Total Number of Pages: 72

Job ID : 14060155

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

Client Project Name :
13-965E / Phase II ESA at Suber Road, COH, TX

Report To :	Client Name:	Geotech Engineering & Testing	P.O.#.:
	Attn:	Rick Manzur	Sample Collected By: Rick Manzur
	Client Address:	800 Victoria Drive	Date Collected: 06/02/14 - 06/03/14
	City, State, Zip:	Houston, Texas, 77022	

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

Client Sample ID	Matrix	A&B Sample ID
B-1 (4'-6')	Soil	14060155.01
B-1 (14'-16')	Soil	14060155.02
B-2 (6'-8')	Soil	14060155.03
B-2 (16'-18')	Soil	14060155.04
B-2 (14'-16')	Soil	14060155.05
B-3 (8'-10')	Soil	14060155.06
B-3 (12'-14')	Soil	14060155.07
B-4 (6'-8')	Soil	14060155.08
B-4 (8'-10')	Soil	14060155.09
B-5 (2'-4')	Soil	14060155.10
B-5 (4'-6')	Soil	14060155.11
B-5 (6'-8')	Soil	14060155.12
B-6 (2'-4')	Soil	14060155.13
B-6 (8'-10')	Soil	14060155.14
B-7 (4'-6')	Soil	14060155.15
B-7 (18'-20')	Soil	14060155.16
B-8 (14'-16')	Soil	14060155.17
B-8 (16'-18')	Soil	14060155.18
B-8 (16'-18')	Soil	14060155.19

Released By: Shantall Carpenter

Title: Senior Project Manager

Date: 6/12/2014

This Laboratory is NELAP (T104704213-14-11) accredited. Effective: 04/01/2014; Expires: 03/31/2015

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 : 06/04/2014 15:00

Laboratory Analysis Report

Total Number of Pages: 72

Job ID : 14060155

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

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

Client Sample ID	Matrix	A&B Sample ID
B-9 (8'-10')	Soil	14060155.20
B-9 (18'-20')	Soil	14060155.21
B-10 (0'-2')	Soil	14060155.22
B-10 (16'-18')	Soil	14060155.23
B-11 (6'-8')	Soil	14060155.24
B-11 (10'-12')	Soil	14060155.25
B-11 (16'-18')	Soil	14060155.26
B-12 (4'-6')	Soil	14060155.27
B-12 (8'-10')	Soil	14060155.28
B-5	Water	14060155.29
B-8	Water	14060155.30
B-10	Water	14060155.31

Released By: Shantall Carpenter

Title: Senior Project Manager

Date: 6/12/2014

This Laboratory is NELAP (T104704213-14-11) accredited. Effective: 04/01/2014; Expires: 03/31/2015

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 : 06/04/2014 15:00

LABORATORY TERM AND QUALIFIER DEFINITION REPORT

Job ID : 14060155

Date: 6/12/2014

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

D1	Sample required dilution due to matrix effects.
E	Estimation. Above calibration range.
J	Estimation. Below calibration range but above MDL.
L2	Associated LCS and/or LCSD recovery is below acceptance limits for flagged analyte. Bias may be low.
M2	Matrix Spike and/or Matrix Spike Duplicate recovery is below laboratory control limits due to matrix interference.
M8	Matrix Spike and/or Matrix Spike Duplicate recovery is above laboratory control limits.
Q16	Chemical preservation may be inappropriate for highly reactive compounds, e.g., styrene, vinyl chloride, 2-chloroethyl vinyl ether, acrylamide, etc., since it may accelerate loss by polymerization or other rapid chemical reaction.
Q18	Soils not collected in a hermetically sealed container may lose low-level VOCs.
R1	RPD exceeds control limits.
R4	LCS/LCSD RPD exceeds control limit. Recovery meets acceptance criteria.
S5	Target compounds caused elevation of baseline. Surrogate not calculated
V1	CCV recovery is above acceptance limits. This target analyte was not detected in the sample.
V6	CCV recovery is above the control limit for this analyte, however the average %difference for all the analytes meets method criteria.

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-1 (4'-6')

Date Collected: 06/03/14

Time Collected: 11:00

Other Information:

Job Sample ID: 14060155.01

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.00	0.01		Q18	06/09/14 19:49	SP
	Toluene	BRL	mg/Kg	1.00	0.01			06/09/14 19:49	SP
	Ethylbenzene	BRL	mg/Kg	1.00	0.01			06/09/14 19:49	SP
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.02			06/09/14 19:49	SP
	o-Xylene	BRL	mg/Kg	1.00	0.01			06/09/14 19:49	SP
	Xylenes	BRL	mg/Kg	1.00	0.01			06/09/14 19:49	SP
	Trifluorotoluene(surr)	99.5	%	1	81-111			06/09/14 19:49	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-1 (14'-16')

Date Collected: 06/03/14

Time Collected: 11:00

Other Information:

Job Sample ID: 14060155.02

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	92.9	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	95.8	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-2 (6'-8')

Date Collected: 06/03/14

Time Collected: 12:00

Other Information:

Job Sample ID: 14060155.03

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	91.3	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	93.5	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-2 (16'-18')

Date Collected: 06/03/14

Time Collected: 12:00

Other Information:

Job Sample ID: 14060155.04

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 6010C	Total Recoverable Metals								
	Arsenic	0.6	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Barium	23.4	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Cadmium	BRL	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Chromium	3.4	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Lead	2.5	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Selenium	BRL	mg/Kg	1	0.5			06/07/14 04:09	SRG
	Silver	BRL	mg/Kg	1	0.5			06/07/14 04:09	SRG
SW-846 7470A	Total Metals - Mercury								
	Mercury	BRL	mg/Kg	1	0.01			06/09/14 15:45	GG

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-2 (14'-16')
Date Collected: 06/03/14
Time Collected: 12:00
Other Information:

Job Sample ID: 14060155.05
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.005		Q18	06/09/14 18:31	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,1-Dichloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,1-Dichloropropene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dibromoethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dichloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dichloropropane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,3-Dichloropropane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	2,2-Dichloropropane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	2-Chlorotoluene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	4-Chlorotoluene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	4-Isopropyltoluene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Benzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Bromobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Bromochloromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Bromodichloromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Bromoform	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Bromomethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Carbon tetrachloride	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Chlorobenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Chloroethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Chloroform	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Chloromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Dibromochloromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-2 (14'-16')
Date Collected: 06/03/14
Time Collected: 12:00
Other Information:

Job Sample ID: 14060155.05
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Ethylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Isopropylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	m- & p-Xylenes	BRL	mg/Kg	1.00	0.010			06/09/14 18:31	BPC
	MEK	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Methylene chloride	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Naphthalene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	n-Butylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	n-Propylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	o-Xylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	sec-Butylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Styrene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	t-butylbenzene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Tetrachloroethylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Toluene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Trichloroethylene	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Trichlorofluoromethane	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	Vinyl Chloride	BRL	mg/Kg	1.00	0.005			06/09/14 18:31	BPC
	1,2-Dichloroethane-d4(surr)	103	%	1.00	70-130			06/09/14 18:31	BPC
	Dibromofluoromethane(surr)	98.4	%	1.00	70-130			06/09/14 18:31	BPC
	p-Bromofluorobenzene(surr)	105	%	1.00	70-130			06/09/14 18:31	BPC
	Toluene-d8(surr)	99.6	%	1.00	70-130			06/09/14 18:31	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-3 (8'-10')

Date Collected: 06/03/14

Time Collected: 12:15

Other Information:

Job Sample ID: 14060155.06

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	97.5	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	99.4	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-3 (12'-14')

Date Collected: 06/03/14

Time Collected: 12:15

Other Information:

Job Sample ID: 14060155.07

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.01	0.0101		Q18	06/07/14 14:07	SP
	Toluene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:07	SP
	Ethylbenzene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:07	SP
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.0202			06/07/14 14:07	SP
	o-Xylene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:07	SP
	Xylenes	BRL	mg/Kg	1.01	0.0101			06/07/14 14:07	SP
	Trifluorotoluene(surr)	100	%	1.01	81-111			06/07/14 14:07	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-4 (6'-8')

Date Collected: 06/02/14

Time Collected: 09:00

Other Information:

Job Sample ID: 14060155.08

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.01	0.0101		Q18	06/07/14 14:59	SP
	Toluene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:59	SP
	Ethylbenzene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:59	SP
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.0202			06/07/14 14:59	SP
	o-Xylene	BRL	mg/Kg	1.01	0.0101			06/07/14 14:59	SP
	Xylenes	BRL	mg/Kg	1.01	0.0101			06/07/14 14:59	SP
	Trifluorotoluene(surr)	101	%	1.01	81-111			06/07/14 14:59	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-4 (8'-10')

Date Collected: 06/02/14

Time Collected: 09:00

Other Information:

Job Sample ID: 14060155.09

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	95.9	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	95.7	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5 (2'-4')
Date Collected: 06/02/14
Time Collected: 09:30
Other Information:

Job Sample ID: 14060155.10
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 6010C	Total Recoverable Metals								
	Arsenic	0.8	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Barium	27.8	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Cadmium	BRL	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Chromium	3.0	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Lead	3.2	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Selenium	BRL	mg/Kg	1	0.5			06/07/14 04:34	SRG
	Silver	BRL	mg/Kg	1	0.5			06/07/14 04:34	SRG
SW-846 7470A	Total Metals - Mercury								
	Mercury	BRL	mg/Kg	1	0.01			06/09/14 16:06	GG

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5 (4'-6')

Date Collected: 06/02/14

Time Collected: 09:30

Other Information:

Job Sample ID: 14060155.11

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	68	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	68.1	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5 (6'-8')
Date Collected: 06/02/14
Time Collected: 09:30
Other Information:

Job Sample ID: 14060155.12
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	0.97	0.005		Q18	06/10/14 16:12	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,1-Dichloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,1-Dichloropropene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dibromoethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dichloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dichloropropane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,3-Dichloropropane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	2,2-Dichloropropane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	2-Chlorotoluene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	4-Chlorotoluene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	4-Isopropyltoluene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Benzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Bromobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Bromochloromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Bromodichloromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Bromoform	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Bromomethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Carbon tetrachloride	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Chlorobenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Chloroethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Chloroform	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Chloromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Dibromochloromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5 (6'-8')
Date Collected: 06/02/14
Time Collected: 09:30
Other Information:

Job Sample ID: 14060155.12
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Ethylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Isopropylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	m- & p-Xylenes	BRL	mg/Kg	0.97	0.010			06/10/14 16:12	BPC
	MEK	0.042	mg/Kg	0.97	0.005		V6	06/10/14 16:12	BPC
	Methylene chloride	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Naphthalene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	n-Butylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	n-Propylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	o-Xylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	sec-Butylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Styrene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	t-butylbenzene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Tetrachloroethylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Toluene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Trichloroethylene	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Trichlorofluoromethane	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	Vinyl Chloride	BRL	mg/Kg	0.97	0.005			06/10/14 16:12	BPC
	1,2-Dichloroethane-d4(surr)	99	%	0.97	70-130			06/10/14 16:12	BPC
	Dibromofluoromethane(surr)	101	%	0.97	70-130			06/10/14 16:12	BPC
	p-Bromofluorobenzene(surr)	105	%	0.97	70-130			06/10/14 16:12	BPC
	Toluene-d8(surr)	102	%	0.97	70-130			06/10/14 16:12	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-6 (2'-4')

Date Collected: 06/02/14

Time Collected: 10:15

Other Information:

Job Sample ID: 14060155.13

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.01	0.010		Q18	06/09/14 20:15	SP
	Toluene	BRL	mg/Kg	1.01	0.010			06/09/14 20:15	SP
	Ethylbenzene	BRL	mg/Kg	1.01	0.010			06/09/14 20:15	SP
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.020			06/09/14 20:15	SP
	o-Xylene	BRL	mg/Kg	1.01	0.010			06/09/14 20:15	SP
	Xylenes	BRL	mg/Kg	1.01	0.010			06/09/14 20:15	SP
	Trifluorotoluene(surr)	101	%	1.01	81-111			06/09/14 20:15	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-6 (8'-10')

Date Collected: 06/02/14

Time Collected: 10:15

Other Information:

Job Sample ID: 14060155.14

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	87.1	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	86.9	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-7 (4'-6')

Date Collected: 06/03/14

Time Collected: 11:00

Other Information:

Job Sample ID: 14060155.15

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.01	0.010		Q18	06/09/14 20:41	SP
	Toluene	BRL	mg/Kg	1.01	0.010			06/09/14 20:41	SP
	Ethylbenzene	BRL	mg/Kg	1.01	0.010			06/09/14 20:41	SP
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.020			06/09/14 20:41	SP
	o-Xylene	BRL	mg/Kg	1.01	0.010			06/09/14 20:41	SP
	Xylenes	BRL	mg/Kg	1.01	0.010			06/09/14 20:41	SP
	Trifluorotoluene(surr)	102	%	1.01	81-111			06/09/14 20:41	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-7 (18'-20')

Date Collected: 06/03/14

Time Collected: 11:00

Other Information:

Job Sample ID: 14060155.16

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	78.1	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	88.7	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8 (14'-16')
Date Collected: 06/03/14
Time Collected: 09:00
Other Information:

Job Sample ID: 14060155.17
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	98.81	0.494		Q18	06/09/14 20:10	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,1-Dichloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,1-Dichloropropene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2,4-Trimethylbenzene	24	mg/Kg	988.14	4.941			06/09/14 20:44	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2-Dibromoethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2-Dichloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2-Dichloropropane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,3,5-Trimethylbenzene	7.72	mg/Kg	988.14	4.941			06/09/14 20:44	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,3-Dichloropropane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	2,2-Dichloropropane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	2-Chlorotoluene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	4-Chlorotoluene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	4-Isopropyltoluene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Benzene	0.753	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Bromobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Bromochloromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Bromodichloromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Bromoform	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Bromomethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Carbon tetrachloride	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Chlorobenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Chloroethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Chloroform	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Chloromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Dibromochloromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8 (14'-16')
Date Collected: 06/03/14
Time Collected: 09:00
Other Information:

Job Sample ID: 14060155.17
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Ethylbenzene	5.62	mg/Kg	988.14	4.941			06/09/14 20:44	BPC
	Isopropylbenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	m- & p-Xylenes	20.4	mg/Kg	988.14	9.881			06/09/14 20:44	BPC
	MEK	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Methylene chloride	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Naphthalene	2.54	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	n-Butylbenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	n-Propylbenzene	2.51	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	o-Xylene	7.14	mg/Kg	988.14	4.941			06/09/14 20:44	BPC
	sec-Butylbenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Styrene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	t-butylbenzene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Tetrachloroethylene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Toluene	9.09	mg/Kg	988.14	4.941			06/09/14 20:44	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Trichloroethylene	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Trichlorofluoromethane	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	Vinyl Chloride	BRL	mg/Kg	98.81	0.494			06/09/14 20:10	BPC
	1,2-Dichloroethane-d4(surr)	94.3	%	98.81	70-130			06/09/14 20:10	BPC
	Dibromofluoromethane(surr)	93.1	%	98.81	70-130			06/09/14 20:10	BPC
	p-Bromofluorobenzene(surr)	109	%	98.81	70-130			06/09/14 20:10	BPC
	Toluene-d8(surr)	97.5	%	98.81	70-130			06/09/14 20:10	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8 (16'-18')

Date Collected: 06/03/14

Time Collected: 09:00

Other Information:

Job Sample ID: 14060155.18

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	96.1	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	99.8	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8 (16'-18')

Date Collected: 06/03/14

Time Collected: 09:00

Other Information:

Job Sample ID: 14060155.19

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 6010C	Total Recoverable Metals								
	Arsenic	0.9	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Barium	21.7	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Cadmium	BRL	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Chromium	2.2	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Lead	2.4	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Selenium	BRL	mg/Kg	1	0.5			06/09/14 17:36	SRG
	Silver	BRL	mg/Kg	1	0.5			06/09/14 17:36	SRG
SW-846 7470A	Total Metals - Mercury								
	Mercury	BRL	mg/Kg	1	0.01			06/09/14 16:10	GG

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-9 (8'-10')

Date Collected: 06/02/14

Time Collected: 13:00

Other Information:

Job Sample ID: 14060155.20

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	87.6	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	87.8	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-9 (18'-20')

Date Collected: 06/02/14

Time Collected: 13:00

Other Information:

Job Sample ID: 14060155.21

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	1.35	mg/Kg	10.00	0.1000		Q18	06/07/14 14:33	SP
	Toluene	23.15	mg/Kg	100.00	1.0000			06/09/14 21:32	SP
	Ethylbenzene	14.3	mg/Kg	100.00	1.0000			06/09/14 21:32	SP
	m- & p-Xylenes	54.3	mg/Kg	100.00	2.0000			06/09/14 21:32	SP
	o-Xylene	19.75	mg/Kg	100.00	1.0000			06/09/14 21:32	SP
	Xylenes	74.05	mg/Kg	100.00	1.0000			06/09/14 21:32	SP
	Trifluorotoluene(surr)	105	%	100.00	81-111			06/07/14 14:33	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10 (0'-2')

Date Collected: 06/02/14

Time Collected: 13:45

Other Information:

Job Sample ID: 14060155.22

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	83.7	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	87.1	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10 (16'-18')
Date Collected: 06/02/14
Time Collected: 13:45
Other Information:

Job Sample ID: 14060155.23
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	94.88	0.474		Q18	06/09/14 21:18	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,1-Dichloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,1-Dichloropropene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2,4-Trimethylbenzene	37.8	mg/Kg	948.77	4.744			06/09/14 21:51	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2-Dibromoethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2-Dichloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2-Dichloropropane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,3,5-Trimethylbenzene	11.9	mg/Kg	948.77	4.744			06/09/14 21:51	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,3-Dichloropropane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	2,2-Dichloropropane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	2-Chlorotoluene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	4-Chlorotoluene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	4-Isopropyltoluene	0.604	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Benzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Bromobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Bromochloromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Bromodichloromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Bromoform	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Bromomethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Carbon tetrachloride	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Chlorobenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Chloroethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Chloroform	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Chloromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Dibromochloromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10 (16'-18')

Date Collected: 06/02/14

Time Collected: 13:45

Other Information:

Job Sample ID: 14060155.23

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Ethylbenzene	10.5	mg/Kg	948.77	4.744			06/09/14 21:51	BPC
	Isopropylbenzene	2.27	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	m- & p-Xylenes	28.9	mg/Kg	948.77	9.488			06/09/14 21:51	BPC
	MEK	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Methylene chloride	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Naphthalene	1.2	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	n-Butylbenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	n-Propylbenzene	10.6	mg/Kg	948.77	4.744			06/09/14 21:51	BPC
	o-Xylene	3.9	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	sec-Butylbenzene	1.16	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Styrene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	t-butylbenzene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Tetrachloroethylene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Toluene	0.673	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Trichloroethylene	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Trichlorofluoromethane	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	Vinyl Chloride	BRL	mg/Kg	94.88	0.474			06/09/14 21:18	BPC
	1,2-Dichloroethane-d4(surr)	97.7	%	94.88	70-130			06/09/14 21:18	BPC
	Dibromofluoromethane(surr)	96.4	%	94.88	70-130			06/09/14 21:18	BPC
	p-Bromofluorobenzene(surr)	113	%	94.88	70-130			06/09/14 21:18	BPC
	Toluene-d8(surr)	104	%	94.88	70-130			06/09/14 21:18	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-11 (6'-8')

Date Collected: 06/02/14

Time Collected: 12:30

Other Information:

Job Sample ID: 14060155.24

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	88.2	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	96.1	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-11 (10'-12')

Date Collected: 06/02/14

Time Collected: 12:30

Other Information:

Job Sample ID: 14060155.25

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8021B	Purgeable Aromatics								
	Benzene	BRL	mg/Kg	1.01	0.010		Q18	06/09/14 21:07	SP
	Toluene	BRL	mg/Kg	1.01	0.010			06/09/14 21:07	SP
	Ethylbenzene	BRL	mg/Kg	1.01	0.010			06/09/14 21:07	SP
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.020			06/09/14 21:07	SP
	o-Xylene	BRL	mg/Kg	1.01	0.010			06/09/14 21:07	SP
	Xylenes	BRL	mg/Kg	1.01	0.010			06/09/14 21:07	SP
	Trifluorotoluene(surr)	101	%	1.01	81-111			06/09/14 21:07	SP

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-11 (16'-18')
Date Collected: 06/02/14
Time Collected: 12:30
Other Information:

Job Sample ID: 14060155.26
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 6010C	Total Recoverable Metals								
	Arsenic	4.4	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Barium	47.3	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Cadmium	BRL	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Chromium	9.4	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Lead	8.0	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Selenium	BRL	mg/Kg	1	0.5			06/09/14 17:46	SRG
	Silver	BRL	mg/Kg	1	0.5			06/09/14 17:46	SRG
SW-846 7470A	Total Metals - Mercury								
	Mercury	BRL	mg/Kg	1	0.01			06/09/14 16:13	GG

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-12 (4'-6')
Date Collected: 06/02/14
Time Collected: 14:30
Other Information:

Job Sample ID: 14060155.27
Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/Kg	1.01	0.005		Q18	06/09/14 17:57	BPC
	1,1,1-Trichloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,1,2-Trichloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,1-Dichloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,1-Dichloroethylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,1-Dichloropropene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2,3-trichlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2,3-Trichloropropane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2,4-Trichlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2,4-Trimethylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dibromoethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dichlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dichloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dichloropropane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,3,5-Trimethylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,3-Dichlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,3-Dichloropropane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,4-Dichlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	2,2-Dichloropropane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	2-Chlorotoluene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	4-Chlorotoluene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	4-Isopropyltoluene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Benzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Bromobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Bromochloromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Bromodichloromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Bromoform	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Bromomethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Carbon tetrachloride	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Chlorobenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Chloroethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Chloroform	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Chloromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	cis-1,2-Dichloroethylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	cis-1,3-Dichloropropene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Dibromochloromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-12 (4'-6')

Date Collected: 06/02/14

Time Collected: 14:30

Other Information:

Job Sample ID: 14060155.27

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Dichlorodifluoromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Ethylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Isopropylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	m- & p-Xylenes	BRL	mg/Kg	1.01	0.010			06/09/14 17:57	BPC
	MEK	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Methylene chloride	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Naphthalene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	n-Butylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	n-Propylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	o-Xylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	sec-Butylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Styrene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	t-butylbenzene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Tetrachloroethylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Toluene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	trans-1,2-Dichloroethylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	trans-1,3-Dichloropropene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Trichloroethylene	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Trichlorofluoromethane	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	Vinyl Chloride	BRL	mg/Kg	1.01	0.005			06/09/14 17:57	BPC
	1,2-Dichloroethane-d4(surr)	103	%	1.01	70-130			06/09/14 17:57	BPC
	Dibromofluoromethane(surr)	87.3	%	1.01	70-130			06/09/14 17:57	BPC
	p-Bromofluorobenzene(surr)	106	%	1.01	70-130			06/09/14 17:57	BPC
	Toluene-d8(surr)	100	%	1.01	70-130			06/09/14 17:57	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-12 (8'-10')

Date Collected: 06/02/14

Time Collected: 14:30

Other Information:

Job Sample ID: 14060155.28

Sample Matrix Soil

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/Kg	1	23.7		Q18	06/06/14 09:00	AVB
	>C12-C28[1]	BRL	mg/Kg	1	20.3			06/06/14 09:00	AVB
	>C28-C35[1]	BRL	mg/Kg	1	17.7			06/06/14 09:00	AVB
	Total C6-C35	BRL	mg/Kg	1				06/06/14 09:00	AVB
	1-Chlorooctane(surr)	89	%	1	60-143			06/06/14 09:00	AVB
	Chlorooctadecane(surr)	86.5	%	1	60-150			06/06/14 09:00	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5
Date Collected: 06/02/14
Time Collected: 09:30
Other Information:

Job Sample ID: 14060155.29
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 200.7	Total Recoverable Metals								
	Arsenic	BRL	mg/L	1	0.01			06/09/14 23:27	SRG
	Barium	0.253	mg/L	1	0.01			06/09/14 23:27	SRG
	Cadmium	BRL	mg/L	1	0.01			06/09/14 23:27	SRG
	Chromium	0.027	mg/L	1	0.01			06/09/14 23:27	SRG
	Lead	0.036	mg/L	1	0.01			06/09/14 23:27	SRG
	Selenium	BRL	mg/L	1	0.05			06/09/14 23:27	SRG
	Silver	BRL	mg/L	1	0.01			06/09/14 23:27	SRG
EPA 245.1	Total Metals - Mercury								
	Mercury	BRL	mg/L	2	0.0004		D1	06/09/14 16:29	GG
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1,1-Trichloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1,2-Trichloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1-Dichloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1-Dichloroethylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,1-Dichloropropene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2,3-trichlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2,3-Trichloropropane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2,4-Trichlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2,4-Trimethylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dibromoethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dichlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dichloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dichloropropane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,3,5-Trimethylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,3-Dichlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,3-Dichloropropane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,4-Dichlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	2,2-Dichloropropane	BRL	mg/L	1	0.005		V1	06/05/14 14:13	BPC
	2-Chlorotoluene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	4-Chlorotoluene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	4-Isopropyltoluene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Benzene	0.0073	mg/L	1	0.005			06/05/14 14:13	BPC
	Bromobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Bromochloromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Bromodichloromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5
Date Collected: 06/02/14
Time Collected: 09:30
Other Information:

Job Sample ID: 14060155.29
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Bromoform	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Bromomethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Carbon tetrachloride	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Chlorobenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Chloroethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Chloroform	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Chloromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	cis-1,2-Dichloroethylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	cis-1,3-Dichloropropene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Dibromochloromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Dibromomethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Dichlorodifluoromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Ethylbenzene	0.0077	mg/L	1	0.005			06/05/14 14:13	BPC
	Isopropylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	m- & p-Xylenes	BRL	mg/L	1	0.01			06/05/14 14:13	BPC
	MEK	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Methylene chloride	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Naphthalene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	n-Butylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	n-Propylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	o-Xylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	sec-Butylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Styrene	BRL	mg/L	1	0.005		Q16	06/05/14 14:13	BPC
	t-butylbenzene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Tetrachloroethylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Toluene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	trans-1,2-Dichloroethylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	trans-1,3-Dichloropropene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Trichloroethylene	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Trichlorofluoromethane	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	Vinyl Chloride	BRL	mg/L	1	0.005		Q16	06/05/14 14:13	BPC
	Xylenes	BRL	mg/L	1	0.005			06/05/14 14:13	BPC
	1,2-Dichloroethane-d4(surr)	101	%	1	70-130			06/05/14 14:13	BPC
	Dibromofluoromethane(surr)	106	%	1	70-130			06/05/14 14:13	BPC
	p-Bromofluorobenzene(surr)	103	%	1	70-130			06/05/14 14:13	BPC
	Toluene-d8(surr)	96.7	%	1	70-130			06/05/14 14:13	BPC
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	BRL	mg/L	0.995	0.995			06/05/14 16:24	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-5

Date Collected: 06/02/14

Time Collected: 09:30

Other Information:

Job Sample ID: 14060155.29

Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	>C12-C28[1]	BRL	mg/L	0.995	0.995			06/05/14 16:24	AVB
	>C28-C35[1]	BRL	mg/L	0.995	1.0945			06/05/14 16:24	AVB
	Total C6-C35	BRL	mg/L	0.995				06/05/14 16:24	AVB
	1-Chlorooctane(surr)	89.7	%	0.995	70-125			06/05/14 16:24	AVB
	Chlorooctadecane(surr)	110	%	0.995	70-125			06/05/14 16:24	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8
Date Collected: 06/03/14
Time Collected: 09:00
Other Information:

Job Sample ID: 14060155.30
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1,1-Trichloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1,2-Trichloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1-Dichloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1-Dichloroethylene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,1-Dichloropropene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2,3-trichlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2,3-Trichloropropane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2,4-Trichlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2,4-Trimethylbenzene	1.55	mg/L	10	0.05		E	06/05/14 15:52	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2-Dibromoethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2-Dichlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2-Dichloroethane	0.14	mg/L	10	0.05			06/05/14 15:52	BPC
	1,2-Dichloropropane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,3,5-Trimethylbenzene	0.45	mg/L	10	0.05			06/05/14 15:52	BPC
	1,3-Dichlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,3-Dichloropropane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	1,4-Dichlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	2,2-Dichloropropane	BRL	mg/L	10	0.05		V1	06/05/14 15:52	BPC
	2-Chlorotoluene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	4-Chlorotoluene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	4-Isopropyltoluene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Benzene	37.9	mg/L	1000	5			06/05/14 16:25	BPC
	Bromobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Bromochloromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Bromodichloromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Bromoform	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Bromomethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Carbon tetrachloride	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Chlorobenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Chloroethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Chloroform	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Chloromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	cis-1,2-Dichloroethylene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	cis-1,3-Dichloropropene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Dibromochloromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-8
Date Collected: 06/03/14
Time Collected: 09:00
Other Information:

Job Sample ID: 14060155.30
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Dibromomethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Dichlorodifluoromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Ethylbenzene	1.88	mg/L	10	0.05		E	06/05/14 15:52	BPC
	Isopropylbenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	m- & p-Xylenes	11.3	mg/L	1000	10			06/05/14 16:25	BPC
	MEK	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Methylene chloride	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Naphthalene	5.67	mg/L	1000	5			06/05/14 16:25	BPC
	n-Butylbenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	n-Propylbenzene	0.168	mg/L	10	0.05			06/05/14 15:52	BPC
	o-Xylene	5.25	mg/L	1000	5			06/05/14 16:25	BPC
	sec-Butylbenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Styrene	BRL	mg/L	10	0.05		Q16	06/05/14 15:52	BPC
	t-butylbenzene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Tetrachloroethylene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Toluene	49	mg/L	1000	5			06/05/14 16:25	BPC
	trans-1,2-Dichloroethylene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	trans-1,3-Dichloropropene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Trichloroethylene	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Trichlorofluoromethane	BRL	mg/L	10	0.05			06/05/14 15:52	BPC
	Vinyl Chloride	BRL	mg/L	10	0.05		Q16	06/05/14 15:52	BPC
	Xylenes	16.55	mg/L	1000	5			06/05/14 16:25	BPC
	1,2-Dichloroethane-d4(surr)	101	%	10	70-130			06/05/14 15:52	BPC
	Dibromofluoromethane(surr)	95.7	%	10	70-130			06/05/14 15:52	BPC
	p-Bromofluorobenzene(surr)	105	%	10	70-130			06/05/14 15:52	BPC
	Toluene-d8(surr)	97.7	%	10	70-130			06/05/14 15:52	BPC
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	54.6	mg/L	0.987	0.987			06/05/14 16:48	AVB
	>C12-C28[1]	4.4	mg/L	0.987	0.987			06/05/14 16:48	AVB
	>C28-C35[1]	BRL	mg/L	0.987	1.0857			06/05/14 16:48	AVB
	Total C6-C35	59	mg/L	0.987				06/05/14 16:48	AVB
	1-Chlorooctane(surr)	N/A	%	0.987	70-125		S5	06/05/14 16:48	AVB
	Chlorooctadecane(surr)	83.6	%	0.987	70-125			06/05/14 16:48	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10
Date Collected: 06/02/14
Time Collected: 13:45
Other Information:

Job Sample ID: 14060155.31
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
EPA 200.7	Total Recoverable Metals								
	Arsenic	BRL	mg/L	1	0.01			06/09/14 23:33	SRG
	Barium	0.687	mg/L	1	0.01			06/09/14 23:33	SRG
	Cadmium	BRL	mg/L	1	0.01			06/09/14 23:33	SRG
	Chromium	0.021	mg/L	1	0.01			06/09/14 23:33	SRG
	Lead	0.044	mg/L	1	0.01			06/09/14 23:33	SRG
	Selenium	BRL	mg/L	1	0.05			06/09/14 23:33	SRG
	Silver	BRL	mg/L	1	0.01			06/09/14 23:33	SRG
EPA 245.1	Total Metals - Mercury								
	Mercury	BRL	mg/L	2	0.0004		D1	06/09/14 16:32	GG
SW-846 8260C	Volatile Organic Compounds								
	1,1,1,2-Tetrachloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1,1-Trichloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1,2,2-Tetrachloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1,2-Trichloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1-Dichloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1-Dichloroethylene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,1-Dichloropropene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2,3-trichlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2,3-Trichloropropane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2,4-Trichlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2,4-Trimethylbenzene	0.713	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dibromo-3-chloropropane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dibromoethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dichlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dichloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dichloropropane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,3,5-Trimethylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,3-Dichlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,3-Dichloropropane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	1,4-Dichlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	2,2-Dichloropropane	BRL	mg/L	100	0.5		V1	06/05/14 16:58	BPC
	2-Chlorotoluene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	4-Chlorotoluene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	4-Isopropyltoluene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Benzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Bromobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Bromochloromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Bromodichloromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10
Date Collected: 06/02/14
Time Collected: 13:45
Other Information:

Job Sample ID: 14060155.31
Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
SW-846 8260C	Volatile Organic Compounds								
	Bromoform	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Bromomethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Carbon tetrachloride	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Chlorobenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Chloroethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Chloroform	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Chloromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	cis-1,2-Dichloroethylene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	cis-1,3-Dichloropropene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Dibromochloromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Dibromomethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Dichlorodifluoromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Ethylbenzene	1.61	mg/L	100	0.5			06/05/14 16:58	BPC
	Isopropylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	m- & p-Xylenes	4.02	mg/L	100	1			06/05/14 16:58	BPC
	MEK	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Methylene chloride	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Naphthalene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	n-Butylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	n-Propylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	o-Xylene	1.43	mg/L	100	0.5			06/05/14 16:58	BPC
	sec-Butylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Styrene	BRL	mg/L	100	0.5		Q16	06/05/14 16:58	BPC
	t-butylbenzene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Tetrachloroethylene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Toluene	2.83	mg/L	100	0.5			06/05/14 16:58	BPC
	trans-1,2-Dichloroethylene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	trans-1,3-Dichloropropene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Trichloroethylene	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Trichlorofluoromethane	BRL	mg/L	100	0.5			06/05/14 16:58	BPC
	Vinyl Chloride	BRL	mg/L	100	0.5		Q16	06/05/14 16:58	BPC
	Xylenes	5.45	mg/L	100	0.5			06/05/14 16:58	BPC
	1,2-Dichloroethane-d4(surr)	97.4	%	100	70-130			06/05/14 16:58	BPC
	Dibromofluoromethane(surr)	98	%	100	70-130			06/05/14 16:58	BPC
	p-Bromofluorobenzene(surr)	106	%	100	70-130			06/05/14 16:58	BPC
	Toluene-d8(surr)	98.3	%	100	70-130			06/05/14 16:58	BPC
TX 1005	Total Petroleum Hydrocarbons								
	C6-C12[1]	12.3	mg/L	0.920	0.92			06/05/14 17:12	AVB

LABORATORY TEST RESULTS

Job ID : 14060155

Date 6/12/2014

Client Name: Geotech Engineering & Testing

Attn: Rick Manzur

Project Name: 13-965E / Phase II ESA at Suber Road, COH, TX

Client Sample ID: B-10

Date Collected: 06/02/14

Time Collected: 13:45

Other Information:

Job Sample ID: 14060155.31

Sample Matrix Water

Test Method	Parameter/Test Description	Result	Units	DF	Rpt Limit	Reg Limit	Q	Date Time	Analyst
TX 1005	Total Petroleum Hydrocarbons								
	>C12-C28[1]	1.74	mg/L	0.920	0.92		J	06/05/14 17:12	AVB
	>C28-C35[1]	BRL	mg/L	0.920	1.012			06/05/14 17:12	AVB
	Total C6-C35	14.04	mg/L	0.920				06/05/14 17:12	AVB
	1-Chlorooctane(surr)	80.8	%	0.920	70-125			06/05/14 17:12	AVB
	Chlorooctadecane(surr)	88.1	%	0.920	70-125			06/05/14 17:12	AVB

[1]-Parameter not available for accreditation

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060520 **Created Date :** 06/05/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.29,30,31

Sample Preparation :	PB14060518	**Prep Method :**	SW-846 5030C	**Prep Date :**	06/05/14 11:00	**Prep By :**	BPcastro
	PB14061139		SW-846 5030C		06/05/14 11:00		BPcastro

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit	Qual
1,1,1,2-Tetrachloroethane	630-20-6	BRL	mg/L	1	0.005	
1,1,1-Trichloroethane	71-55-6	BRL	mg/L	1	0.005	
1,1,2,2-Tetrachloroethane	79-34-5	BRL	mg/L	1	0.005	
1,1,2-Trichloroethane	79-00-5	BRL	mg/L	1	0.005	
1,1-Dichloroethane	75-34-3	BRL	mg/L	1	0.005	
1,1-Dichloroethylene	75-35-4	BRL	mg/L	1	0.005	
1,1-Dichloropropene	563-58-6	BRL	mg/L	1	0.005	
1,2,3-trichlorobenzene	87-61-6	BRL	mg/L	1	0.005	
1,2,3-Trichloropropane	96-18-4	BRL	mg/L	1	0.005	
1,2,4-Trichlorobenzene	120-82-1	BRL	mg/L	1	0.005	
1,2,4-Trimethylbenzene	95-63-6	BRL	mg/L	1	0.005	
1,2-Dibromo-3-chloropropa	96-12-8	BRL	mg/L	1	0.005	
1,2-Dibromoethane	106-93-4	BRL	mg/L	1	0.006	
1,2-Dichlorobenzene	95-50-1	BRL	mg/L	1	0.005	
1,2-Dichloroethane	107-06-2	BRL	mg/L	1	0.005	
1,2-Dichloropropane	78-87-5	BRL	mg/L	1	0.006	
1,3,5-Trimethylbenzene	108-67-8	BRL	mg/L	1	0.005	
1,3-Dichlorobenzene	541-73-1	BRL	mg/L	1	0.005	
1,3-Dichloropropane	142-28-9	BRL	mg/L	1	0.005	
1,4-Dichlorobenzene	106-46-7	BRL	mg/L	1	0.005	
2,2-Dichloropropane	594-20-7	BRL	mg/L	1	0.005	V1
2-Chlorotoluene	95-49-8	BRL	mg/L	1	0.005	
4-Chlorotoluene	106-43-4	BRL	mg/L	1	0.005	
4-Isopropyltoluene	99-87-6	BRL	mg/L	1	0.005	
Benzene	71-43-2	BRL	mg/L	1	0.005	
Bromobenzene	108-86-1	BRL	mg/L	1	0.005	
Bromochloromethane	74-97-5	BRL	mg/L	1	0.006	
Bromodichloromethane	75-27-4	BRL	mg/L	1	0.006	
Bromoform	75-25-2	BRL	mg/L	1	0.005	
Bromomethane	74-83-9	BRL	mg/L	1	0.005	
Carbon tetrachloride	56-23-5	BRL	mg/L	1	0.006	
Chlorobenzene	108-90-7	BRL	mg/L	1	0.005	
Chloroethane	75-00-3	BRL	mg/L	1	0.006	
Chloroform	67-66-3	BRL	mg/L	1	0.006	
Chloromethane	74-87-3	BRL	mg/L	1	0.005	
cis-1,2-Dichloroethylene	156-59-2	BRL	mg/L	1	0.005	
cis-1,3-Dichloropropene	10061-01-5	BRL	mg/L	1	0.006	
Dibromochloromethane	124-48-1	BRL	mg/L	1	0.005	
Dibromomethane	74-95-3	BRL	mg/L	1	0.005	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060520 **Created Date :** 06/05/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.29,30,31

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Dichlorodifluoromethane	75-71-8	BRL	mg/L	1	0.006		
Ethylbenzene	100-41-4	BRL	mg/L	1	0.005		
Isopropylbenzene	98-82-8	BRL	mg/L	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/L	1	0.01		
MEK	78-93-3	BRL	mg/L	1	0.005		
Methylene chloride	75-09-2	BRL	mg/L	1	0.005		
Naphthalene	91-20-3	BRL	mg/L	1	0.005		
n-Butylbenzene	104-51-8	BRL	mg/L	1	0.005		
n-Propylbenzene	103-65-1	BRL	mg/L	1	0.005		
o-Xylene	95-47-6	BRL	mg/L	1	0.005		
sec-Butylbenzene	135-98-8	BRL	mg/L	1	0.005		
Styrene	100-42-5	BRL	mg/L	1	0.005		
t-butylbenzene	98-06-6	BRL	mg/L	1	0.005		
Tetrachloroethylene	127-18-4	BRL	mg/L	1	0.006		
Toluene	108-88-3	BRL	mg/L	1	0.005		
trans-1,2-Dichloroethylene	156-60-5	BRL	mg/L	1	0.005		
trans-1,3-Dichloropropene	10061-02-6	BRL	mg/L	1	0.005		
Trichloroethylene	79-01-6	BRL	mg/L	1	0.005		
Trichlorofluoromethane	75-69-4	BRL	mg/L	1	0.005		
Vinyl Chloride	75-01-4	BRL	mg/L	1	0.005		
Xylenes	1330-20-7	BRL	mg/L	1	0.015		
Dibromofluoromethane(surr	1868-53-7	105	%	1	70-130		
1,2-Dichloroethane-d4(surr	17060-07-0	100	%	1	70-130		
Toluene-d8(surr)	2037-26-5	97.1	%	1	70-130		
p-Bromofluorobenzene(surr	460-00-4	108	%	1	70-130		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.018	90	0.02	0.019	95	5.4	12	86.6-113	
1,1,1-Trichloroethane	0.02	0.018	90	0.02	0.018	90	0.0	13	76.9-125	
1,1,2,2-Tetrachloroethane	0.02	0.019	95	0.02	0.02	100	5.1	20	74.4-125	
1,1,2-Trichloroethane	0.02	0.019	95	0.02	0.02	100	5.1	14	82.4-117	
1,1-Dichloroethane	0.02	0.017	85	0.02	0.017	85	0.0	12	74.5-125	
1,1-Dichloroethylene	0.02	0.017	85	0.02	0.017	85	0.0	12	75.4-124	
1,1-Dichloropropene	0.02	0.017	85	0.02	0.017	85	0.0	12	76.9-125	
1,2,3-trichlorobenzene	0.02	0.018	90	0.02	0.019	95	5.4	20	70.8-125	
1,2,3-Trichloropropane	0.02	0.019	95	0.02	0.02	100	5.1	22	69.6-126	
1,2,4-Trichlorobenzene	0.02	0.018	90	0.02	0.019	95	5.4	16	74.8-121	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060520 **Created Date :** 06/05/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.29,30,31

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
1,2,4-Trimethylbenzene	0.02	0.016	80	0.02	0.018	90	11.8	12	80.4-114	L2
1,2-Dibromo-3-chloropropa	0.02	0.018	90	0.02	0.02	100	10.5	27	61.7-140	
1,2-Dibromoethane	0.02	0.018	90	0.02	0.019	95	5.4	15	80.6-118	
1,2-Dichlorobenzene	0.02	0.018	90	0.02	0.019	95	5.4	11	82.6-113	
1,2-Dichloroethane	0.02	0.019	95	0.02	0.019	95	0.0	14	72.8-126	
1,2-Dichloropropane	0.02	0.018	90	0.02	0.018	90	0.0	13	82.4-120	
1,3,5-Trimethylbenzene	0.02	0.017	85	0.02	0.018	90	5.7	10	81.3-114	
1,3-Dichlorobenzene	0.02	0.018	90	0.02	0.019	95	5.4	11	83.4-113	
1,3-Dichloropropane	0.02	0.018	90	0.02	0.018	90	0.0	16	79.8-115	
1,4-Dichlorobenzene	0.02	0.018	90	0.02	0.019	95	5.4	11	82.6-113	
2,2-Dichloropropane	0.02	0.018	90	0.02	0.018	90	0.0	15	69.4-131	V1
2-Chlorotoluene	0.02	0.016	80	0.02	0.018	90	11.8	17	77.8-118	
4-Chlorotoluene	0.02	0.018	90	0.02	0.018	90	0.0	15	78.8-117	
4-Isopropyltoluene	0.02	0.016	80	0.02	0.018	90	11.8	11	80.9-114	L2,R1
Benzene	0.02	0.017	85	0.02	0.017	85	0.0	11	84.1-118	
Bromobenzene	0.02	0.018	90	0.02	0.019	95	5.4	12	82.8-116	
Bromochloromethane	0.02	0.018	90	0.02	0.018	90	0.0	15	70.7-131	
Bromodichloromethane	0.02	0.018	90	0.02	0.019	95	5.4	12	83.1-119	
Bromoform	0.02	0.02	100	0.02	0.02	100	0.0	20	70.3-136	
Bromomethane	0.02	0.017	85	0.02	0.018	90	5.7	23	59-134	
Carbon tetrachloride	0.02	0.017	85	0.02	0.017	85	0.0	13	74.6-129	
Chlorobenzene	0.02	0.017	85	0.02	0.018	90	5.7	11	87.8-110	L2
Chloroethane	0.02	0.016	80	0.02	0.017	85	6.1	13	73.7-124	
Chloroform	0.02	0.018	90	0.02	0.018	90	0.0	10	76.4-124	
Chloromethane	0.02	0.015	75	0.02	0.014	70	6.9	15	59.4-138	
cis-1,2-Dichloroethylene	0.02	0.017	85	0.02	0.018	90	5.7	15	74.3-124	
cis-1,3-Dichloropropene	0.02	0.019	95	0.02	0.019	95	0.0	11	84.6-117	
Dibromochloromethane	0.02	0.019	95	0.02	0.019	95	0.0	13	81.6-118	
Dibromomethane	0.02	0.019	95	0.02	0.02	100	5.1	16	75.8-126	
Dichlorodifluoromethane	0.02	0.015	75	0.02	0.015	75	0.0	15	44.4-149	
Ethylbenzene	0.02	0.017	85	0.02	0.018	90	5.7	12	82.8-114	
Isopropylbenzene	0.02	0.017	85	0.02	0.018	90	5.7	11	86.8-113	L2
m- & p-Xylenes	0.04	0.034	85	0.04	0.035	87.5	2.9	10	76.9-122	
MEK	0.02	0.018	90	0.02	0.017	85	5.7	42	44.9-154	
Methylene chloride	0.02	0.017	85	0.02	0.018	90	5.7	13	67.3-130	
Naphthalene	0.02	0.017	85	0.02	0.019	95	11.1	27	55.8-136	
n-Butylbenzene	0.02	0.017	85	0.02	0.019	95	11.1	20	74.1-120	
n-Propylbenzene	0.02	0.016	80	0.02	0.018	90	11.8	12	78.9-115	
o-Xylene	0.02	0.017	85	0.02	0.018	90	5.7	11	86-111	L2
sec-Butylbenzene	0.02	0.016	80	0.02	0.017	85	6.1	12	80.2-115	L2
Styrene	0.02	0.018	90	0.02	0.018	90	0.0	12	86.7-111	
t-butylbenzene	0.02	0.016	80	0.02	0.018	90	11.8	14	80.7-116	L2

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060520 **Created Date :** 06/05/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.29,30,31

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
Tetrachloroethylene	0.02	0.014	70	0.02	0.016	80	13.3	27	77.9-126	L2
Toluene	0.02	0.017	85	0.02	0.018	90	5.7	12	85.9-110	L2
trans-1,2-Dichloroethylene	0.02	0.017	85	0.02	0.017	85	0.0	12	73.7-124	
trans-1,3-Dichloropropene	0.02	0.019	95	0.02	0.02	100	5.1	14	83-114	
Trichloroethylene	0.02	0.017	85	0.02	0.018	90	5.7	12	85.4-114	L2
Trichlorofluoromethane	0.02	0.018	90	0.02	0.017	85	5.7	12	74.3-126	
Vinyl Chloride	0.02	0.016	80	0.02	0.017	85	6.1	17	68-129	
Xylenes	0.06	0.051	85	0.06	0.053	88.3	3.9	9	81.2-117	

QC Type: MS and MSD
QC Sample ID: 14060155.29

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	0.022	110	0.02	0.021	105	4.7	35	72-139	
1,1,1-Trichloroethane	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	82-137	
1,1,2,2-Tetrachloroethane	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	55-149	
1,1,2-Trichloroethane	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	68-139	
1,1-Dichloroethane	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	78-134	
1,1-Dichloroethylene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	65-141	
1,1-Dichloropropene	BRL	0.02	0.021	105	0.02	0.022	110	4.7	35	79-136	
1,2,3-trichlorobenzene	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	54-144	
1,2,3-Trichloropropane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	58-156	
1,2,4-Trichlorobenzene	BRL	0.02	0.023	115	0.02	0.023	115	0.0	35	69-127	
1,2,4-Trimethylbenzene	BRL	0.02	0.022	105	0.02	0.021	100	4.9	35	80-131	
1,2-Dibromo-3-chloropropa	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	61-145	
1,2-Dibromoethane	BRL	0.02	0.022	110	0.02	0.02	100	9.5	35	68-140	
1,2-Dichlorobenzene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	70-138	
1,2-Dichloroethane	BRL	0.02	0.023	115	0.02	0.022	110	4.4	35	67-152	
1,2-Dichloropropane	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	79-135	
1,3,5-Trimethylbenzene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	79-133	
1,3-Dichlorobenzene	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	79-128	
1,3-Dichloropropane	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	70-147	
1,4-Dichlorobenzene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	76-127	
2,2-Dichloropropane	BRL	0.02	0.024	120	0.02	0.023	115	4.3	35	60-129	V1
2-Chlorotoluene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	83-130	
4-Chlorotoluene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	82-129	
4-Isopropyltoluene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	78-129	
Benzene	0.0073	0.02	0.028	104	0.02	0.028	104	0.0	35	73-129	
Bromobenzene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	76-132	
Bromochloromethane	BRL	0.02	0.022	110	0.02	0.02	100	9.5	35	76-135	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060520 **Created Date :** 06/05/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.29,30,31

QC Type: MS and MSD
QC Sample ID: 14060155.29

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Bromodichloromethane	BRL	0.02	0.023	115	0.02	0.021	105	9.1	35	80-136	
Bromoform	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	65-139	
Bromomethane	BRL	0.02	0.023	115	0.02	0.021	105	9.1	35	65-150	
Carbon tetrachloride	BRL	0.02	0.023	115	0.02	0.022	110	4.4	35	70-136	
Chlorobenzene	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	69-123	
Chloroethane	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	74-145	
Chloroform	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	78-132	
Chloromethane	BRL	0.02	0.019	95	0.02	0.02	100	5.1	35	69-139	
cis-1,2-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	71-134	
cis-1,3-Dichloropropene	BRL	0.02	0.023	115	0.02	0.022	110	4.4	35	74-128	
Dibromochloromethane	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	67-141	
Dibromomethane	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	75-135	
Dichlorodifluoromethane	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	62-146	
Ethylbenzene	0.0077	0.02	0.029	107	0.02	0.029	107	0.0	35	80-132	
Isopropylbenzene	BRL	0.02	0.023	108	0.02	0.023	108	0.0	35	78-137	
m- & p-Xylenes	BRL	0.04	0.05	105	0.04	0.05	211	0.0	35	74-127	
MEK	BRL	0.02	0.019	95	0.02	0.019	95	0.0	35	52-148	
Methylene chloride	BRL	0.02	0.021	96	0.02	0.02	91	5.4	35	68-131	
Naphthalene	BRL	0.02	0.021	97	0.02	0.022	102	5	35	61-116	
n-Butylbenzene	BRL	0.02	0.019	95	0.02	0.021	105	10	35	73-140	
n-Propylbenzene	BRL	0.02	0.023	102	0.02	0.023	102	0.0	35	75-127	
o-Xylene	BRL	0.02	0.023	115	0.02	0.022	110	4.4	35	74-126	
sec-Butylbenzene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	75-129	
Styrene	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	77-123	
t-butylbenzene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	75-126	
Tetrachloroethylene	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	70-130	
Toluene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	72-121	
trans-1,2-Dichloroethylene	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	73-138	
trans-1,3-Dichloropropene	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	70-133	
Trichloroethylene	BRL	0.02	0.022	110	0.02	0.021	105	4.7	35	6-138	
Trichlorofluoromethane	BRL	0.02	0.022	110	0.02	0.022	110	0.0	35	67-148	
Vinyl Chloride	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	80-122	
Xylenes	BRL	0.06	0.073	122	0.06	0.072	120	1.4	35	73-127	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : qb14060562 **Created Date :** 06/05/14 **Created By :** AVBembde

Samples in This QC Batch : 14060155.29,30,31

Sample Preparation : PB14060605 **Prep Method :** TX 1005 **Prep Date :** 06/05/14 16:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/L	1	1		
>C12-C28	TPH-1005-2	BRL	mg/L	1	1		
>C28-C35	TPH-1005-4	BRL	mg/L	1	1.1		
Total C6-C35		BRL	mg/L	1			
Chlorooctadecane(surr)	3386-33-2	81.8	%	1	70-125		
1-Chlorooctane(surr)	111-85-3	78.7	%	1	70-125		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	43	41.4	96.3	43	53.5	124	25.5	20	75-125	R4
>C12-C28	43	41.9	97.4	43	52.2	121	21.9	20	75-125	R4
>C28-C35	43	37.9	88.1	43	46	107	19.3	20	75-125	

QC Type: MS and MSD
QC Sample ID: 14060158.12

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	1.29	42.9	46.5	105	42.9	51.1	116	9.7	20	75-125	
>C12-C28	BRL	42.9	47.5	110	42.9	51	118	7.2	20	75-125	
>C28-C35	BRL	42.9	44.1	102	42.9	45.6	106	3.4	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : qb14060658 **Created Date :** 06/06/14 **Created By :** AVBembde

Samples in This QC Batch : 14060155.02,03,06,09,11,14,16,18,20,22,24,28

Sample Preparation : PB14060643 **Prep Method :** TX 1005 **Prep Date :** 06/05/14 16:00 **Prep By :** AVBembde

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
C6-C12	TPH-1005-1	BRL	mg/Kg	1	23.7		
>C12-C28	TPH-1005-2	BRL	mg/Kg	1	20.3		
>C28-C35	TPH-1005-4	BRL	mg/Kg	1	17.7		
Total C6-C35		BRL	mg/Kg	1			
Chlorooctadecane(surr)	3386-33-2	89	%	1	60-150		
1-Chlorooctane(surr)	111-85-3	90.8	%	1	60-143		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
C6-C12	500	563	113	500	608	122	7.7	20	75-125	
>C12-C28	500	556	111	500	605	121	8.4	20	75-125	
>C28-C35	500	616	123	500	616	123	0	20	75-125	

QC Type: MS and MSD
QC Sample ID: 14060135.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
C6-C12	BRL	500	539	108	500	569	114	5.4	20	75-125	
>C12-C28	BRL	500	570	114	500	580	116	1.7	20	75-125	
>C28-C35	BRL	500	612	122	500	620	124	1.3	20	75-125	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

Analysis : **Total Recoverable Metals** **Method :** **SW-846 6010C** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb14060706 **Created Date :** 06/06/14 **Created By :** SRGade

Samples in This QC Batch : 14060155.04,10,19,26

Digestion : PB14060706 **Prep Method :** SW-846 3050B **Prep Date :** 06/06/14 16:46 **Prep By :** Eperez

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Arsenic	7440-38-2	BRL	mg/Kg	1	0.5		
Barium	7440-39-3	BRL	mg/Kg	1	0.5		
Cadmium	7440-43-9	BRL	mg/Kg	1	0.5		
Chromium	7440-47-3	BRL	mg/Kg	1	0.5		
Lead	7439-92-1	BRL	mg/Kg	1	0.5		
Selenium	7782-49-2	BRL	mg/Kg	1	0.5		
Silver	7440-22-4	BRL	mg/Kg	1	0.5		

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
Arsenic	25	22.1	88.5	25	22.2	88.7	0.2	20	80-120	
Barium	25	23.7	94.8	25	23.6	94.5	0.2	20	80-120	
Cadmium	25	21.7	86.7	25	21.6	86.4	0.4	20	80-120	
Chromium	25	24.2	96.7	25	24.2	96.8	0.1	20	80-120	
Lead	25	22.3	89.1	25	22.2	88.7	0.4	20	80-120	
Selenium	25	21.1	84.3	25	20.9	83.7	0.7	20	80-120	
Silver	25	22.1	88.5	25	22.1	88.4	0.2	20	80-120	

QC Type: MS and MSD
QC Sample ID: 14060155.04

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Arsenic	0.6107	25	18.7	72.4						70-130	
Barium	23.3631	25	42.2	75.3						70-130	
Cadmium	BRL	25	18.3	73.4						70-130	
Chromium	3.3798	25	23.0	78.5						70-130	
Lead	2.4670	25	19.3	67.3						70-130	M2
Selenium	BRL	25	16.7	66.9						70-130	M2
Silver	BRL	25	18.6	74.6						70-130	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060901 **Created Date :** 06/09/14 **Created By :** Spabba

Samples in This QC Batch : 14060155.07,08,21

Sample Preparation : PB14060903 **Prep Method :** SW-846 5035A **Prep Date :** 06/06/14 17:30 **Prep By :** Psaraiya

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Benzene	71-43-2	BRL	mg/Kg	1	0.005		
Toluene	108-88-3	BRL	mg/Kg	1	0.005		
Ethylbenzene	100-41-4	BRL	mg/Kg	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1	0.01		
o-Xylene	95-47-6	BRL	mg/Kg	1	0.005		
Xylenes	1330-20-7	BRL	mg/Kg	1	0.005		
Trifluorotoluene(surr)	98-08-8	103	%	1	81-111		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Benzene	0.05	0.048	96	0.05	0.048	96	0.0	20	76.2-128	
Toluene	0.05	0.048	96	0.05	0.048	96	0.0	20	74.2-126	
Ethylbenzene	0.05	0.048	96	0.05	0.049	98	2.1	20	79.4-125	
m- & p-Xylenes	0.1	0.096	96	0.1	0.097	97	1	20	76.3-126	
o-Xylene	0.05	0.048	96	0.05	0.049	98	2.1	20	77.1-123	
Xylenes	0.15	0.144	96	0.15	0.146	97.3	1.4	20	77.2-125	

QC Type: MS and MSD
QC Sample ID: 14060136.02

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Benzene	BRL	0.049	0.041	83.7	0.05	0.042	84	2.4	19	68-138	
Toluene	BRL	0.049	0.04	81.6	0.05	0.042	84	4.9	19	67-135	
Ethylbenzene	BRL	0.049	0.04	81.6	0.05	0.042	84	4.9	20	71-127	
m- & p-Xylenes	BRL	0.098	0.08	81.6	0.1	0.083	83	3.7	27	56-135	
o-Xylene	BRL	0.049	0.042	85.7	0.05	0.041	82	2.4	24	56-134	
Xylenes	BRL	0.147	0.122	83	0.15	0.124	82.7	1.6	25	59-134	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060931 **Created Date :** 06/09/14 **Created By :** SBojja

Samples in This QC Batch : 14060155.01,13,15,25

Sample Preparation : PB14060925 **Prep Method :** SW-846 5035A **Prep Date :** 06/09/14 09:40 **Prep By :** Psaraiya

QC Type: Method Blank

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

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
Benzene	0.05	0.06	120	0.05	0.05	100	18.2	20	76.2-128	
Toluene	0.05	0.061	122	0.05	0.05	100	19.8	20	74.2-126	
Ethylbenzene	0.05	0.061	122	0.05	0.051	102	17.9	20	79.4-125	
m- & p-Xylenes	0.1	0.121	121	0.1	0.101	101	18	20	76.3-126	
o-Xylene	0.05	0.06	120	0.05	0.05	100	18.2	20	77.1-123	
Xylenes	0.15	0.181	121	0.15	0.151	101	18.1	20	77.2-125	

QC Type: MS and MSD
QC Sample ID: 14060271.06

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Benzene	BRL	0.05	0.046	92	0.051	0.047	92.2	2.2	19	68-138	
Toluene	BRL	0.05	0.046	92	0.051	0.047	92.2	2.2	19	67-135	
Ethylbenzene	BRL	0.05	0.047	94	0.051	0.048	94.1	2.1	20	71-127	
m- & p-Xylenes	BRL	0.1	0.092	92	0.101	0.095	94.1	3.2	27	56-135	
o-Xylene	BRL	0.05	0.045	90	0.051	0.046	90.2	2.2	24	56-134	
Xylenes	BRL	0.15	0.137	91.3	0.152	0.141	92.8	2.9	25	59-134	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

Analysis : **Total Metals - Mercury** **Method :** **SW-846 7470A** **Reporting Units :** **mg/Kg**

QC Batch ID : Qb14060957 **Created Date :** 06/09/14 **Created By :** Ggorane

Samples in This QC Batch : 14060155.04,10,19,26

Digestion : PB14060941 **Prep Method :** SW-846 7470A **Prep Date :** 06/09/14 09:59 **Prep By :** Eperez

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Mercury	7439-97-6	BRL	mg/Kg	1	0.01		

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
Mercury	0.1	0.086	85.8	0.1	0.094	93.8	8.8	20	80-120	

QC Type: MS and MSD
QC Sample ID: 14060155.04

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Mercury	BRL	0.1	0.104	104						70-130	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060961 **Created Date :** 06/09/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.05,17,23,27

Sample Preparation : PB14060948 **Prep Method :** SW-846 5035A **Prep Date :** 06/09/14 10:00 **Prep By :** BPcastro

QC Type: Method Blank

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

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060961 **Created Date :** 06/09/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.05,17,23,27

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Ethylbenzene	100-41-4	BRL	mg/Kg	1	0.005		
Isopropylbenzene	98-82-8	BRL	mg/Kg	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1	0.01		
MEK	78-93-3	BRL	mg/Kg	1	0.005		
Methylene chloride	75-09-2	BRL	mg/Kg	1	0.005		
Naphthalene	91-20-3	BRL	mg/Kg	1	0.005		
n-Butylbenzene	104-51-8	BRL	mg/Kg	1	0.005		
n-Propylbenzene	103-65-1	BRL	mg/Kg	1	0.005		
o-Xylene	95-47-6	BRL	mg/Kg	1	0.005		
sec-Butylbenzene	135-98-8	BRL	mg/Kg	1	0.005		
Styrene	100-42-5	BRL	mg/Kg	1	0.005		
t-butylbenzene	98-06-6	BRL	mg/Kg	1	0.005		
Tetrachloroethylene	127-18-4	BRL	mg/Kg	1	0.005		
Toluene	108-88-3	BRL	mg/Kg	1	0.005		
trans-1,2-Dichloroethylene	156-60-5	BRL	mg/Kg	1	0.005		
trans-1,3-Dichloropropene	10061-02-6	BRL	mg/Kg	1	0.005		
Trichloroethylene	79-01-6	BRL	mg/Kg	1	0.005		
Trichlorofluoromethane	75-69-4	BRL	mg/Kg	1	0.005		
Vinyl Chloride	75-01-4	BRL	mg/Kg	1	0.005		
Dibromofluoromethane(surr	1868-53-7	101	%	1	70-130		
1,2-Dichloroethane-d4(surr	17060-07-0	95.9	%	1	70-130		
Toluene-d8(surr)	2037-26-5	100	%	1	70-130		
p-Bromofluorobenzene(surr	460-00-4	104	%	1	70-130		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.02	100	0.02	0.02	100	0.0	30	71.4-131	
1,1,1-Trichloroethane	0.02	0.02	100	0.02	0.02	100	0.0	30	69.6-140	
1,1,2,2-Tetrachloroethane	0.02	0.018	90	0.02	0.019	95	5.4	30	66.6-128	
1,1,2-Trichloroethane	0.02	0.019	95	0.02	0.02	100	5.1	30	72.8-125	
1,1-Dichloroethane	0.02	0.02	100	0.02	0.021	105	4.9	30	72.7-129	
1,1-Dichloroethylene	0.02	0.021	105	0.02	0.022	110	4.7	30	71.4-131	
1,1-Dichloropropene	0.02	0.02	100	0.02	0.021	105	4.9	30	75.9-132	
1,2,3-trichlorobenzene	0.02	0.019	95	0.02	0.02	100	5.1	30	56.7-153	
1,2,3-Trichloropropane	0.02	0.018	90	0.02	0.019	95	5.4	30	61.6-138	
1,2,4-Trichlorobenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	55.9-150	
1,2,4-Trimethylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.1-131	
1,2-Dibromo-3-chloropropa	0.02	0.017	85	0.02	0.019	95	11.1	30	52.4-150	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060961 **Created Date :** 06/09/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.05,17,23,27

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,2-Dibromoethane	0.02	0.019	95	0.02	0.019	95	0.0	30	72.9-125	
1,2-Dichlorobenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	76.1-126	
1,2-Dichloroethane	0.02	0.02	100	0.02	0.02	100	0.0	30	66.4-134	
1,2-Dichloropropane	0.02	0.02	100	0.02	0.021	105	4.9	30	70.2-128	
1,3,5-Trimethylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	75.1-127	
1,3-Dichlorobenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	73.9-126	
1,3-Dichloropropane	0.02	0.019	95	0.02	0.02	100	5.1	30	68.3-124	
1,4-Dichlorobenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	72.3-127	
2,2-Dichloropropane	0.02	0.022	110	0.02	0.022	110	0.0	30	68.5-138	
2-Chlorotoluene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.7-128	
4-Chlorotoluene	0.02	0.019	95	0.02	0.02	100	5.1	30	72.2-126	
4-Isopropyltoluene	0.02	0.02	100	0.02	0.02	100	0.0	30	77.5-125	
Benzene	0.02	0.021	105	0.02	0.021	105	0.0	30	74-126	
Bromobenzene	0.02	0.019	95	0.02	0.019	95	0.0	30	73.3-129	
Bromochloromethane	0.02	0.021	105	0.02	0.022	110	4.7	30	68.8-131	
Bromodichloromethane	0.02	0.02	100	0.02	0.02	100	0.0	30	69-135	
Bromoform	0.02	0.018	90	0.02	0.02	100	10.5	30	62-146	
Bromomethane	0.02	0.021	105	0.02	0.021	105	0.0	30	58.7-139	
Carbon tetrachloride	0.02	0.021	105	0.02	0.021	105	0.0	30	68.7-135	
Chlorobenzene	0.02	0.02	100	0.02	0.021	105	4.9	30	73.3-129	
Chloroethane	0.02	0.021	105	0.02	0.021	105	0.0	30	66.2-129	
Chloroform	0.02	0.02	100	0.02	0.02	100	0.0	30	73.7-134	
Chloromethane	0.02	0.02	100	0.02	0.021	105	4.9	30	51.4-135	
cis-1,2-Dichloroethylene	0.02	0.021	105	0.02	0.022	110	4.7	30	72.4-132	
cis-1,3-Dichloropropene	0.02	0.02	100	0.02	0.021	105	4.9	30	67.7-134	
Dibromochloromethane	0.02	0.019	95	0.02	0.02	100	5.1	30	73.2-126	
Dibromomethane	0.02	0.02	100	0.02	0.02	100	0.0	30	69.9-134	
Dichlorodifluoromethane	0.02	0.02	100	0.02	0.022	110	9.5	30	36.8-144	
Ethylbenzene	0.02	0.02	100	0.02	0.021	105	4.9	30	72.2-128	
Isopropylbenzene	0.02	0.02	100	0.02	0.021	105	4.9	30	71.2-131	
m- & p-Xylenes	0.04	0.04	100	0.04	0.041	103	2.5	30	70.7-131	
MEK	0.02	0.022	110	0.02	0.022	110	0.0	30	52.5-152	
Methylene chloride	0.02	0.017	85	0.02	0.018	90	5.7	30	70.6-129	
Naphthalene	0.02	0.019	95	0.02	0.019	95	0.0	30	60.7-145	
n-Butylbenzene	0.02	0.018	90	0.02	0.021	105	15.4	30	66.5-136	
n-Propylbenzene	0.02	0.02	100	0.02	0.021	105	4.9	30	73.3-126	
o-Xylene	0.02	0.019	95	0.02	0.02	100	5.1	30	71.6-130	
sec-Butylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	77.9-124	
Styrene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.1-131	
t-butylbenzene	0.02	0.021	105	0.02	0.02	100	4.9	30	74.4-130	
Tetrachloroethylene	0.02	0.02	100	0.02	0.02	100	0.0	30	62.6-157	
Toluene	0.02	0.02	100	0.02	0.021	105	4.9	30	73.3-127	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060961 **Created Date :** 06/09/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.05,17,23,27

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
trans-1,2-Dichloroethylene	0.02	0.021	105	0.02	0.022	110	4.7	30	80-120	
trans-1,3-Dichloropropene	0.02	0.019	95	0.02	0.021	105	10	30	71.5-124	
Trichloroethylene	0.02	0.021	105	0.02	0.021	105	0.0	30	69.2-133	
Trichlorofluoromethane	0.02	0.02	100	0.02	0.02	100	0.0	30	63.9-140	
Vinyl Chloride	0.02	0.02	100	0.02	0.021	105	4.9	30	40.9-159	

QC Type: MS and MSD
QC Sample ID: 14060155.27

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	0.02	100	0.02	0.02	100	0.0	35	71.4-131	
1,1,1-Trichloroethane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	69.6-140	
1,1,2,2-Tetrachloroethane	BRL	0.02	BRL		0.02	BRL			35	66.6-128	M2
1,1,2-Trichloroethane	BRL	0.02	0.019	95	0.02	0.019	95	0.0	35	72.8-125	
1,1-Dichloroethane	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	72.7-129	
1,1-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	71.4-131	
1,1-Dichloropropene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	75.9-132	
1,2,3-trichlorobenzene	BRL	0.02	0.02	100	0.02	0.018	90	10.5	35	56.7-153	
1,2,3-Trichloropropane	BRL	0.02	0.019	95	0.02	0.021	105	10	35	61.6-138	
1,2,4-Trichlorobenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	55.9-150	
1,2,4-Trimethylbenzene	BRL	0.02	0.021	87	0.02	0.02	82	5.9	35	71.1-131	
1,2-Dibromo-3-chloropropa	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	52.4-150	
1,2-Dibromoethane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	72.9-125	
1,2-Dichlorobenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	76.1-126	
1,2-Dichloroethane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	66.4-134	
1,2-Dichloropropane	BRL	0.02	0.021	105	0.02	0.019	95	10	35	70.2-128	
1,3,5-Trimethylbenzene	BRL	0.02	0.021	96	0.02	0.02	91	5.4	35	75.1-127	
1,3-Dichlorobenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	73.9-126	
1,3-Dichloropropane	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	68.3-124	
1,4-Dichlorobenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	72.3-127	
2,2-Dichloropropane	BRL	0.02	0.019	95	0.02	0.019	95	0.0	35	68.5-138	
2-Chlorotoluene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	71.7-128	
4-Chlorotoluene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	72.2-126	
4-Isopropyltoluene	BRL	0.02	0.019	95	0.02	0.019	95	0.0	35	77.5-125	
Benzene	BRL	0.02	0.021	105	0.02	0.021	105	0.0	35	74-126	
Bromobenzene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	73.3-129	
Bromochloromethane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	68.8-131	
Bromodichloromethane	BRL	0.02	0.019	95	0.02	0.019	95	0.0	35	69-135	
Bromoform	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	62-146	
Bromomethane	BRL	0.02	0.018	90	0.02	0.018	90	0.0	35	58.7-139	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14060961 **Created Date :** 06/09/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.05,17,23,27

QC Type: MS and MSD
QC Sample ID: 14060155.27

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Carbon tetrachloride	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	68.7-135	
Chlorobenzene	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	73.3-129	
Chloroethane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	66.2-129	
Chloroform	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	73.7-134	
Chloromethane	BRL	0.02	0.017	85	0.02	0.017	85	0.0	35	51.4-135	
cis-1,2-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	72.4-132	
cis-1,3-Dichloropropene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	67.7-134	
Dibromochloromethane	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	73.2-126	
Dibromomethane	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	69.9-134	
Dichlorodifluoromethane	BRL	0.02	0.017	85	0.02	0.016	80	6.1	35	36.8-144	
Ethylbenzene	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	72.2-128	
Isopropylbenzene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	71.2-131	
m- & p-Xylenes	BRL	0.04	0.041	98.3	0.04	0.042	101	2.5	35	70.7-131	
MEK	BRL	0.02	0.028	140	0.02	0.028	140	0.0	35	52.5-152	
Methylene chloride	BRL	0.02	0.019	85	0.02	0.019	85	0.0	35	70.6-129	
Naphthalene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	60.7-145	
n-Butylbenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	66.5-136	
n-Propylbenzene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	73.3-126	
o-Xylene	BRL	0.02	0.021	105	0.02	0.022	110	4.7	35	71.6-130	
sec-Butylbenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	77.9-124	
Styrene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	71.1-131	
t-butylbenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	74.4-130	
Tetrachloroethylene	BRL	0.02	0.036	180	0.02	0.037	185	2.7	35	62.6-157	M8
Toluene	BRL	0.02	0.021	105	0.02	0.022	110	4.7	35	73.3-127	
trans-1,2-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	70-130	
trans-1,3-Dichloropropene	BRL	0.02	0.02	100	0.02	0.02	100	0.0	35	71.5-124	
Trichloroethylene	BRL	0.02	0.036	180	0.02	0.037	185	2.7	35	69.2-133	M8
Trichlorofluoromethane	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	63.9-140	
Vinyl Chloride	BRL	0.02	0.017	85	0.02	0.017	85	0.0	35	40.9-159	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

Analysis : **Total Metals - Mercury** **Method :** **EPA 245.1** **Reporting Units :** **mg/L**

QC Batch ID : Qb14061044 **Created Date :** 06/09/14 **Created By :** Ggorane

Samples in This QC Batch : 14060155.29,31

Digestion : PB14061027 **Prep Method :** EPA 245.1 **Prep Date :** 06/09/14 09:59 **Prep By :** Eperez

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Mercury	7439-97-6	BRL	mg/L	1	0.0002		

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
Mercury	0.005	0.0044	87.8	0.005	0.0044	87.6	0.2	35	80-120	

QC Type: MS and MSD
QC Sample ID: 14060264.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Mercury	BRL	0.005	0.0046	92.6						80-120	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14061069 **Created Date :** 06/10/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.12

Sample Preparation : PB14061049 **Prep Method :** SW-846 5035A **Prep Date :** 06/10/14 10:00 **Prep By :** BPcastro

QC Type: Method Blank

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

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14061069 **Created Date :** 06/10/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.12

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Ethylbenzene	100-41-4	BRL	mg/Kg	1	0.005		
Isopropylbenzene	98-82-8	BRL	mg/Kg	1	0.005		
m- & p-Xylenes	108-38-3&106-42-3	BRL	mg/Kg	1	0.01		
MEK	78-93-3	BRL	mg/Kg	1	0.005		V6
Methylene chloride	75-09-2	BRL	mg/Kg	1	0.005		
Naphthalene	91-20-3	BRL	mg/Kg	1	0.005		
n-Butylbenzene	104-51-8	BRL	mg/Kg	1	0.005		
n-Propylbenzene	103-65-1	BRL	mg/Kg	1	0.005		
o-Xylene	95-47-6	BRL	mg/Kg	1	0.005		
sec-Butylbenzene	135-98-8	BRL	mg/Kg	1	0.005		
Styrene	100-42-5	BRL	mg/Kg	1	0.005		
t-butylbenzene	98-06-6	BRL	mg/Kg	1	0.005		
Tetrachloroethylene	127-18-4	BRL	mg/Kg	1	0.005		
Toluene	108-88-3	BRL	mg/Kg	1	0.005		
trans-1,2-Dichloroethylene	156-60-5	BRL	mg/Kg	1	0.005		
trans-1,3-Dichloropropene	10061-02-6	BRL	mg/Kg	1	0.005		
Trichloroethylene	79-01-6	BRL	mg/Kg	1	0.005		
Trichlorofluoromethane	75-69-4	BRL	mg/Kg	1	0.005		
Vinyl Chloride	75-01-4	BRL	mg/Kg	1	0.005		
Dibromofluoromethane(surr	1868-53-7	93.4	%	1	70-130		
1,2-Dichloroethane-d4(surr	17060-07-0	86.7	%	1	70-130		
Toluene-d8(surr)	2037-26-5	102	%	1	70-130		
p-Bromofluorobenzene(surr	460-00-4	109	%	1	70-130		

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,1,1,2-Tetrachloroethane	0.02	0.02	100	0.02	0.02	100	0.0	30	71.4-131	
1,1,1-Trichloroethane	0.02	0.02	100	0.02	0.021	105	4.9	30	69.6-140	
1,1,2,2-Tetrachloroethane	0.02	0.02	100	0.02	0.021	105	4.9	30	66.6-128	
1,1,2-Trichloroethane	0.02	0.021	105	0.02	0.021	105	0.0	30	72.8-125	
1,1-Dichloroethane	0.02	0.021	105	0.02	0.021	105	0.0	30	72.7-129	
1,1-Dichloroethylene	0.02	0.02	100	0.02	0.022	110	9.5	30	71.4-131	
1,1-Dichloropropene	0.02	0.02	100	0.02	0.021	105	4.9	30	75.9-132	
1,2,3-trichlorobenzene	0.02	0.019	95	0.02	0.019	95	0.0	30	56.7-153	
1,2,3-Trichloropropane	0.02	0.018	90	0.02	0.019	95	5.4	30	61.6-138	
1,2,4-Trichlorobenzene	0.02	0.019	95	0.02	0.019	95	0.0	30	55.9-150	
1,2,4-Trimethylbenzene	0.02	0.02	100	0.02	0.019	95	5.1	30	71.1-131	
1,2-Dibromo-3-chloropropa	0.02	0.019	95	0.02	0.02	100	5.1	30	52.4-150	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14061069 **Created Date :** 06/10/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.12

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
1,2-Dibromoethane	0.02	0.019	95	0.02	0.02	100	5.1	30	72.9-125	
1,2-Dichlorobenzene	0.02	0.02	100	0.02	0.019	95	5.1	30	76.1-126	
1,2-Dichloroethane	0.02	0.019	95	0.02	0.02	100	5.1	30	66.4-134	
1,2-Dichloropropane	0.02	0.021	105	0.02	0.022	110	4.7	30	70.2-128	
1,3,5-Trimethylbenzene	0.02	0.02	100	0.02	0.019	95	5.1	30	75.1-127	
1,3-Dichlorobenzene	0.02	0.019	95	0.02	0.019	95	0.0	30	73.9-126	
1,3-Dichloropropane	0.02	0.02	100	0.02	0.02	100	0.0	30	68.3-124	
1,4-Dichlorobenzene	0.02	0.019	95	0.02	0.019	95	0.0	30	72.3-127	
2,2-Dichloropropane	0.02	0.021	105	0.02	0.021	105	0.0	30	68.5-138	
2-Chlorotoluene	0.02	0.019	95	0.02	0.019	95	0.0	30	71.7-128	
4-Chlorotoluene	0.02	0.019	95	0.02	0.019	95	0.0	30	72.2-126	
4-Isopropyltoluene	0.02	0.02	100	0.02	0.019	95	5.1	30	77.5-125	
Benzene	0.02	0.02	100	0.02	0.021	105	4.9	30	74-126	
Bromobenzene	0.02	0.02	100	0.02	0.019	95	5.1	30	73.3-129	
Bromochloromethane	0.02	0.02	100	0.02	0.021	105	4.9	30	68.8-131	
Bromodichloromethane	0.02	0.02	100	0.02	0.021	105	4.9	30	69-135	
Bromoform	0.02	0.02	100	0.02	0.02	100	0.0	30	62-146	
Bromomethane	0.02	0.021	105	0.02	0.023	115	9.1	30	58.7-139	
Carbon tetrachloride	0.02	0.02	100	0.02	0.02	100	0.0	30	68.7-135	
Chlorobenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	73.3-129	
Chloroethane	0.02	0.021	105	0.02	0.021	105	0.0	30	66.2-129	
Chloroform	0.02	0.02	100	0.02	0.021	105	4.9	30	73.7-134	
Chloromethane	0.02	0.021	105	0.02	0.021	105	0.0	30	51.4-135	
cis-1,2-Dichloroethylene	0.02	0.02	100	0.02	0.022	110	9.5	30	72.4-132	
cis-1,3-Dichloropropene	0.02	0.02	100	0.02	0.021	105	4.9	30	67.7-134	
Dibromochloromethane	0.02	0.02	100	0.02	0.019	95	5.1	30	73.2-126	
Dibromomethane	0.02	0.02	100	0.02	0.021	105	4.9	30	69.9-134	
Dichlorodifluoromethane	0.02	0.02	100	0.02	0.02	100	0.0	30	36.8-144	
Ethylbenzene	0.02	0.021	105	0.02	0.021	105	0.0	30	72.2-128	
Isopropylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.2-131	
m- & p-Xylenes	0.04	0.041	103	0.04	0.041	103	0.0	30	70.7-131	
MEK	0.02	0.023	115	0.02	0.02	100	14	30	52.5-152	V6
Methylene chloride	0.02	0.017	85	0.02	0.019	95	11.1	30	70.6-129	
Naphthalene	0.02	0.019	95	0.02	0.02	100	5.1	30	60.7-145	
n-Butylbenzene	0.02	0.02	100	0.02	0.019	95	5.1	30	66.5-136	
n-Propylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	73.3-126	
o-Xylene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.6-130	
sec-Butylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	77.9-124	
Styrene	0.02	0.02	100	0.02	0.02	100	0.0	30	71.1-131	
t-butylbenzene	0.02	0.02	100	0.02	0.02	100	0.0	30	74.4-130	
Tetrachloroethylene	0.02	0.02	100	0.02	0.02	100	0.0	30	62.6-157	
Toluene	0.02	0.021	105	0.02	0.021	105	0.0	30	73.3-127	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14061069 **Created Date :** 06/10/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.12

QC Type: LCS and LCSD

Parameter	LCS Spk Added	LCS Result	LCS % Rec	LCSD Spk Added	LCSD Result	LCSD % Rec	RPD	RPD CtrlLimit	%Recovery CtrlLimit	Qual
trans-1,2-Dichloroethylene	0.02	0.021	105	0.02	0.022	110	4.7	30	80-120	
trans-1,3-Dichloropropene	0.02	0.02	100	0.02	0.021	105	4.9	30	71.5-124	
Trichloroethylene	0.02	0.021	105	0.02	0.021	105	0.0	30	69.2-133	
Trichlorofluoromethane	0.02	0.019	95	0.02	0.021	105	10	30	63.9-140	
Vinyl Chloride	0.02	0.021	105	0.02	0.02	100	4.9	30	40.9-159	

QC Type: MS and MSD
QC Sample ID: 14060155.12

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	0.019	95	0.02	0.019	95	0	35	69.6-140	
1,1,2,2-Tetrachloroethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	66.6-128	
1,1,2-Trichloroethane	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	72.8-125	
1,1-Dichloroethane	BRL	0.02	0.019	95	0.02	0.02	100	5.1	35	72.7-129	
1,1-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0	35	71.4-131	
1,1-Dichloropropene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	75.9-132	
1,2,3-trichlorobenzene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	56.7-153	
1,2,3-Trichloropropane	BRL	0.02	0.016	80	0.02	0.017	85	6.1	35	61.6-138	
1,2,4-Trichlorobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	55.9-150	
1,2,4-Trimethylbenzene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	71.1-131	
1,2-Dibromo-3-chloropropa	BRL	0.02	0.019	95	0.02	0.019	95	0	35	52.4-150	
1,2-Dibromoethane	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	72.9-125	
1,2-Dichlorobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	76.1-126	
1,2-Dichloroethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	66.4-134	
1,2-Dichloropropane	BRL	0.02	0.019	95	0.02	0.019	95	0	35	70.2-128	
1,3,5-Trimethylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	75.1-127	
1,3-Dichlorobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	73.9-126	
1,3-Dichloropropane	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	68.3-124	
1,4-Dichlorobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	72.3-127	
2,2-Dichloropropane	BRL	0.02	0.019	95	0.02	0.019	95	0	35	68.5-138	
2-Chlorotoluene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	71.7-128	
4-Chlorotoluene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	72.2-126	
4-Isopropyltoluene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	77.5-125	
Benzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	74-126	
Bromobenzene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	73.3-129	
Bromochloromethane	BRL	0.02	0.02	100	0.02	0.02	100	0	35	68.8-131	
Bromodichloromethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	69-135	
Bromoform	BRL	0.02	0.018	90	0.02	0.018	90	0	35	62-146	
Bromomethane	BRL	0.02	0.02	100	0.02	0.021	105	4.9	35	58.7-139	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

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

QC Batch ID : Qb14061069 **Created Date :** 06/10/14 **Created By :** BPcastro

Samples in This QC Batch : 14060155.12

QC Type: MS and MSD
QC Sample ID: 14060155.12

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Carbon tetrachloride	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	68.7-135	
Chlorobenzene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	73.3-129	
Chloroethane	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	66.2-129	
Chloroform	BRL	0.02	0.019	95	0.02	0.019	95	0	35	73.7-134	
Chloromethane	BRL	0.02	0.019	95	0.02	0.02	100	5.1	35	51.4-135	
cis-1,2-Dichloroethylene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	72.4-132	
cis-1,3-Dichloropropene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	67.7-134	
Dibromochloromethane	BRL	0.02	0.018	90	0.02	0.018	90	0	35	73.2-126	
Dibromomethane	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	69.9-134	
Dichlorodifluoromethane	BRL	0.02	0.019	95	0.02	0.019	95	0	35	36.8-144	
Ethylbenzene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	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	0.038	95	0.04	0.037	92.5	2.7	35	70.7-131	
MEK	0.042	0.02	0.059	85	0.02	0.063	105	21.1	35	52.5-152	V6
Methylene chloride	BRL	0.02	0.017	85	0.02	0.018	90	5.7	35	70.6-129	
Naphthalene	BRL	0.02	0.021	105	0.02	0.02	100	4.9	35	60.7-145	
n-Butylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	66.5-136	
n-Propylbenzene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	73.3-126	
o-Xylene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	71.6-130	
sec-Butylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	77.9-124	
Styrene	BRL	0.02	0.018	90	0.02	0.018	90	0	35	71.1-131	
t-butylbenzene	BRL	0.02	0.019	95	0.02	0.018	90	5.4	35	74.4-130	
Tetrachloroethylene	BRL	0.02	0.02	100	0.02	0.019	95	5.1	35	62.6-157	
Toluene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	73.3-127	
trans-1,2-Dichloroethylene	BRL	0.02	0.02	100	0.02	0.02	100	0	35	70-130	
trans-1,3-Dichloropropene	BRL	0.02	0.018	90	0.02	0.019	95	5.4	35	71.5-124	
Trichloroethylene	BRL	0.02	0.019	95	0.02	0.019	95	0	35	69.2-133	
Trichlorofluoromethane	BRL	0.02	0.019	95	0.02	0.019	95	0	35	63.9-140	
Vinyl Chloride	BRL	0.02	0.019	95	0.02	0.019	95	0	35	40.9-159	

Refer to the Definition page for terms.

QUALITY CONTROL CERTIFICATE

Job ID : 14060155 **Date :** 6/12/2014

Analysis : **Total Recoverable Metals** **Method :** **EPA 200.7** **Reporting Units :** **mg/L**

QC Batch ID : Qb14061078 **Created Date :** 06/09/14 **Created By :** SRGade

Samples in This QC Batch : 14060155.29,31

Digestion : PB14061058 **Prep Method :** EPA 200.7 **Prep Date :** 06/09/14 13:43 **Prep By :** Eperez

QC Type: Method Blank

Parameter	CAS #	Result	Units	D.F.	RptLimit		Qual
Arsenic	7440-38-2	BRL	mg/L	1	0.01		
Barium	7440-39-3	BRL	mg/L	1	0.01		
Cadmium	7440-43-9	BRL	mg/L	1	0.01		
Chromium	7440-47-3	BRL	mg/L	1	0.01		
Lead	7439-92-1	BRL	mg/L	1	0.01		
Selenium	7782-49-2	BRL	mg/L	1	0.05		
Silver	7440-22-4	BRL	mg/L	1	0.01		

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
Arsenic	1	0.968	96.8	1	0.967	96.7	0.1	20	85-115	
Barium	1	0.989	98.9	1	0.996	99.6	0.7	20	85-115	
Cadmium	1	0.944	94.4	1	0.945	94.5	0.1	20	85-115	
Chromium	1	1.020	102	1	1.023	102	0.3	20	85-115	
Lead	1	0.967	96.7	1	0.968	96.8	0.1	20	85-115	
Selenium	1	0.964	96.4	1	0.967	96.7	0.3	20	85-115	
Silver	1	1.006	101	1	1.012	101	0.6	20	85-115	

QC Type: MS and MSD
QC Sample ID: 14060199.01

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Spk Added	MSD Result	MSD % Rec	RPD	RPD CtrlLimit	%Rec CtrlLimit	Qual
Arsenic	BRL	1	1.011	101						75-125	
Barium	0.173	1	1.128	95.5						75-125	
Cadmium	BRL	1	0.960	96						75-125	
Chromium	BRL	1	1.005	100						75-125	
Lead	0.00761	1	0.928	92.1						75-125	
Selenium	BRL	1	0.986	98.6						75-125	
Silver	BRL	1	0.998	99.8						75-125	

Refer to the Definition page for terms.

A & B Labs — *Chain of Custody*

The Chain of Custody is a Legal Document

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 14060155

5. Project # 13-965E

1. REPORT TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Mansur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

2. INVOICE TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Mansur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☒ 7 Days - Standard

6. Project Name/Location: Phase II ESA at Suber Road, COH, TX

7. Reporting Requirement:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☐ EDD

8. Sampler's Name & Company (PLEASE PRINT): Rick Mansur, Geotech Engg & Testing
Sampler's Signature & Date: Rick Mansur 6/3/14

13. No. of Containers
14. Containers*
15. Preservatives**
16. PH-Lab Only
17. Analyses/Methods

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Drinking Water	Air	Other	BTEX	TPH	VOC	RCRA Metal				18. REMARKS
01A	B-1 (4'-6')	6/3/14	11:00				X						X							
02A	B-1 (14'-16')	6/3/14	11:00				X							X						
03A	B-2 (6'-8')	6/3/14	12:00				X							X						
04A	B-2 (16'-18')	6/3/14	12:00				X								X					
05A	B-2 (14'-16')	6/3/14	12:00				X									X				
06A	B-3 (8'-10')	6/3/14	12:15				X							X						
07A	B-3 (12'-14')	6/3/14	12:15				X						X							
08A	B-4 (6'-8')	6/2/14	9:00				X						X							
09A	B-4 (8'-10')	6/2/14	9:00				X							X						

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Rick Mansur	6/4/14	1042	[illegible]	6/4/14	1042
2 [illegible]	6/4/14	1500	[illegible]	6/4/14	1500
3					

21. KNOWN HAZARDS/COMMENTS

Temperature: 1.9 - 0.4 = 1.5
Thermometer ID 102002320
Intact: Y or N Initials [illegible]

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other

**Preservatives: C - Cool; H - HCl; N - HNO_3; S - H_2SO_4; OH - NaOH; T - $NA_2S_2O_3$; X - Other

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

A & B Labs — *Chain of Custody*

The Chain of Custody is a Legal Document

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 19060155

5. Project # 13-965 E

1. REPORT TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manjur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

2. INVOICE TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manjur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☒ 7 Days - Standard

6. Project Name/Location: Phase II ESA at Silber Road, COH, TX

7. Reporting Requirement:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☐ EDD

8. Sampler's Name & Company (PLEASE PRINT): Rick Manjur; Geotech Engg & Testing
Sampler's Signature & Date: Rick Manjur 6/3/14

13. No. of Containers
14. Containers*
15. Preservatives**
16. PH-Lab Only
17. Analyses/Methods

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix Water	Soil	Sludge	Oil	Drinking Water	Air	Other	BTEX	TPH	VOC	RCRA Metal				18. REMARKS
10A	B-5 (2'-4')	6/2/14	9:30				X								X					
11A	B-5 (4'-6')	6/2/14	9:30				X							X						
12A	B-5 (6'-8')	6/2/14	9:30				X								X					
13A	B-6 (2'-4')	6/2/14	10:15				X						X							
14A	B-6 (8'-10')	6/2/14	10:15				X							X						
15A	B-7 (4'-6')	6/3/14	11:00				X						X							
16A	B-7 (18'-20')	6/3/14	11:00				X							X						
17A	B-8 (14'-16')	6/3/14	9:00				X								X					
18A	B-8 (16'-18')	6/3/14	9:00				X							X						
19A	B-8 (16'-18')	6/3/14	9:00				X									X				

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Rick Manjur	6/4/14	1042	Blas A. Hernandez	6/4/14	1042
2 Blas A. Hernandez	6/4/14	1500		6/4/14	1500
3					

21. KNOWN HAZARDS/COMMENTS

Temperature: 1.9-0.4=1.5
Thermometer ID 102002320
Intact: Y or N Initials

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other

**Preservatives: C - Cool; OH - NaOH; H - HCl; T - $NA_2S_2O_3$; N - HNO_3; X - Other; S - H_2SO_4

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

A & B Labs *Chain of Custody* The Chain of Custody is a Legal Document

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 17060155

5. Project # 13-965 E

1. REPORT TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manzur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

2. INVOICE TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manzur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☒ 7 Days - Standard

6. Project Name/Location: Phase II ESA at Silber Road, COH, TX

7. Reporting Requirement:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☐ EDD

8. Sampler's Name & Company (PLEASE PRINT): Rick Manzur; Geotech Engg & Testing
Sampler's Signature & Date: Rick Manzur 6/3/14

13. 14. Containers* / 15. Preservatives** / 16. PH-Lab Only

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Drinking Water	Air	Other	No. of Containers	17. Analyses/Methods: BTEX	TPH	VOC	RCRA Metal				18. REMARKS
20A	B-9 (8'-10')	6/2/14	13:00				X								X						
21A	B-9 (18'-20')	6/2/14	13:00				X							X							
22A	B-10 (0'-2')	6/2/14	13:45				X								X						
23A	B-10 (16'-18')	6/2/14	13:45				X									X					
24A	B-11 (6'-8')	6/2/14	12:30				X								X						
25A	B-11 (10'-12')	6/2/14	12:30				X							X							
26A	B-11 (16'-18')	6/2/14	12:30				X									X					
27A	B-12 (4'-6')	6/2/14	14:30				X									X					
28A	B-12 (8'-10')	6/2/14	14:30				X								X						

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Rick Manzur	6/4/14	1042	[illegible]	6/4/14	1042
2 [illegible]	6/4/14	1500	[illegible]	6/4/14	1500
3					

21. KNOWN HAZARDS/COMMENTS

Temperature: 1.9 - 0.4 = 1.5
Thermometer ID 10200320
Intact: Y or N Initials

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other

**Preservatives: C - Cool; H - HCl; N - HNO_3; S - H_2SO_4; OH - NaOH; T - $NA_2S_2O_3$; X - Other

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

A & B Labs *Chain of Custody*

The Chain of Custody is a Legal Document

10100 East Fwy (I-10)
Suite 100
Houston, TX 77029
713-453-6060
1-877-478-6060 Toll Free
713-453-6091 Fax
ablabs.com

A&B JOB ID # 14060155

5. Project # 13-965 E

1. REPORT TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manzur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

2. INVOICE TO:
Company: Geotech Engg & Testing
Address: 800 Victoria Drive, Houston, TX 77022
Contact: Rick Manzur
Phone: 713-699-4000
Fax: ☐
E-mail: ☐ rick@geotecheng.com

3. PO #
3a. A&B Quote #
4. Turnaround Time (Business Days)
☐ 1 Day* ☐ Other:
☐ 2 Days*
☐ 3 Days* *Surcharge applies
☒ 7 Days - Standard

6. Project Name/Location
Phase II ESA at Silber Road, COH, TX

7. Reporting Requirement:
☐ TRRP Limits only ☐ TRRP Rpt. Package ☐ See Attached ☐ Standard Level II ☐ PST ☐ MDL ☐ EDD

8. Sampler's Name & Company (PLEASE PRINT): Rick Manzur; Geotech Engg & Testing
Sampler's Signature & Date: Rick Manzur 6/3/14

13. No. of Containers
14. Containers*
15. Preservatives**
16. PH-Lab Only
17. Analyses/Methods

LAB USE ONLY	9. Sample ID and Description	10. Sampling Date	Time 24hr	11. Comp.	Grab	12. Matrix: Water	Soil	Sludge	Oil	Drinking Water	Air	Other	TPH TBC	VOC DCF	RCRA Metal 6	18. REMARKS
2MA-G	B-5	6/2/14	9:30			X							X	X	X	
3DA-F	B-8	6/3/14	9:00			X							X	X		
3IAK-G	B-10	6/2/14	13:45			X							X	X	X	

19. RELINQUISHED BY	DATE	TIME	20. RECEIVED BY	DATE	TIME
1 Rick Manzur	6/4/14	1042	[signature]	6/4/14	1042
2 [signature]	6/4/14	1500	[signature]	6/4/14	1500
3					

21. KNOWN HAZARDS/COMMENTS

Temperature: 1.9 - 0.4 = 1.5
Thermometer ID 102402320
Intact: Y or N Initials

A&B cannot accept verbal changes
Please FAX written changes to 713-453-6091

Samples will be disposed of after 30 days

*Containers: VOA - 40 ml vial; 4 oz/8 oz - glass wide mouth; A/G - Amber/Glass 1 Liter; P/O - Plastic/other

**Preservatives: C - Cool; H - HCl; N - HNO_3; S - H_2SO_4; OH - NaOH; T - $NA_2S_2O_3$; X - Other

METHOD OF SHIPMENT

BILL OF LADING/TRACKING #

Sample Condition Checklist

A&B JobID : **14060155**	Date Received : **06/04/2014**	Time Received : **3:00PM**
Client Name : **Geotech Engineering & Testing**		
Temperature : **1.9-0.4cf=1.58°C**	Sample pH : **<2 Metals**	
Thermometer ID : **102002320**	pH Paper ID : **56393**	

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

Comments : Include actions taken to resolve discrepancies/problem:

Headspace in all VOAs. 09A Sample ID on the COC is "B-4 (8'-10')" versus container label which states "B-4 (10'-12')". AS 6/5/14

Received by : AHall

Check in by/date : AHall / 06/04/2014

APPENDIX C

Project Site Pictures

Picture # 1

Picture # 2

Picture # 3

Picture # 4

Picture # 5

Picture # 6

Picture # 7

Picture # 8

Picture # 9

Picture # 10

APPENDIX D

Waste Disposal Manifest

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 5091 Pineview LF AL

Waste Profile #
Sales Rep #:

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

I. Generator Information

Generator Name: Geotech Engineering & Testing			
Generator Site Address: Silber Road from I-10 to Hartland Street			
City: Houston	County: Harris	State: Texas	Zip: 77055
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 800 Victoria Drive			
City: Houston	County: Harris	State: Texas	Zip: 77022
Generator Contact Name: Rick Manzur		Email: rick@geotecheng.com	
Phone Number: (713) 699-4000	Ext: 306	Fax Number:	

II. Billing Information

Bill To: Geotech Enginering & Testing		Contact Name: Jessica Reagan	
Billing Address: 800 Victoria Drive		Email:	
City: Houston	State: Texas	Zip: 77022	Phone: (713) 699-4000

III. Waste Stream Information

Name of Waste: Phase II Environmental Site Assessment at Silber Road, COH, TX	
Process Generating Waste: Soil samples were obtained from the Silber Road alignment as a part of the Phase II ESA study authorised by COH. Soil samples were sent for chemical tests and unused samples were stored inside a sealed 55-gal drum. These soils samples needs to be discarded in Hazerdous Solid Waste Landfill.	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☐ BULK ☑ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	2 Drums
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ 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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	

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Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. BTEX	
2. MTBE	
3. VOC	
4. RCRA Metal	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Gray, Brown	Petroleum odor	☐ YES or ☑ NO			°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 its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ 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)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ 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?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ 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 myself 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.

RICK MANZUR; Staff Engineer	GEOTECH ENGINEERING & TESTING
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	07/08/2014
	Date

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APPENDIX E

Qualifications of Environmental Professionals

YONGWAN (ALEX) KWON, P.E.
ENGINEERING MANAGER

SUMMARY

Mr. Kwon is a project manager at Geotech Engineering and Testing (GET) with the responsibility for the daily operations of geotechnical explorations, data analyses and the preparation of report recommendations. He has experience in fields of geotechnical, materials, and environmental engineering. His experience has been in design and construction of educational facilities, parking lots, pools, medical facilities, shopping centers, commercial buildings, residences, subdivisions, parks, and underground utilities. His other experience includes research and development in the field of soils, rock materials testing for slopes, retaining walls, pavements, low to high rise buildings, slope protection remedial works, deep foundations, flood control channels, community centers, office buildings, and subdivisions. His other experience includes research and development in the field of unsaturated soil mechanics (expansive soils).

PROFESSIONAL REGISTRATION

Registered Professional Engineer

EDUCATION

2009 M.S. – University of Florida, Gainesville, Florida

1998 M.S. – Hanyang University, Seoul, Korea

1996 B.S. – Hanyang University, Seoul, Korea

EXPERIENCE

2010 – Present
Geotech Engineering and Testing – Houston, Texas
Project Manager

RICK MANZUR
PROJECT MANAGER

SUMMARY

Dr. Rick Manzur is a project manager at Geotech Engineering and Testing (GET) with the responsibility for the daily operations of environmental and geotechnical explorations, data analysis and the preparation of report recommendations. He has experience in the fields of geotechnical, materials, and environmental engineering. His environmental engineering experience is related to public infrastructure residential, commercial developments, educational facilities, roads, underground utilities and buildings. Dr. Manzur actively involved in environmental site assessment projects, including Phase I and Phase II Environmental Site Assessment Studies.

EDUCATION

2013 Doctor of Philosophy (Ph.D.) in Civil Engineering – The University of Texas at Arlington (UTA), Arlington, Texas

2010 Masters of Science (M.S.) in Civil Engineering – The University of Texas at Arlington (UTA), Arlington, Texas

2007 Bachelors of Science (B. Sc.) in Civil Engineering – Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

PROFESSIONAL REGISTRATION

Engineer in Training – Texas Board of Professional Engineer

EXPERIENCE

2012 – Present
Geotech Engineering and Testing – Houston, Texas
Project Manager