Housing Authority of the
County of Alameda

22941 Atherton Street, Hayward, CA 94541
Tel. 510.538.8876 TDD 510.727.8551 Fax 510.727.8554 www.haca.net

March 24, 2015

Alameda County Environmental Health
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Attention: Mark Detterman

Re: 22941 Atherton Street, Hayward, CA
ACEH Case File: RO#3152

Dear Mr. Detterman:

Enclosed please find the *Site Investigation Completion Report*, prepared by SCA Environmental, Inc. (SCA), dated March 24, 2015. We believe SCA to be experienced and qualified to advise us in a technical area that requires a high degree of professional expertise. Therefore, we have relied upon SCA's assistance, knowledge, and expertise in their preparation of this report. I am unaware of any material inaccuracy in the information in the report or any violation of government guidelines that are applicable to the report.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Very truly yours,

Christine Gouig
Executive Director

Cc: Tom Makin, Acting Deputy Director for Operations

SITE INVESTIGATION COMPLETION REPORT
22941 ATHERTON STREET
HAYWARD, CALIFORNIA
ACEH CASE FILE: RO#3152

PREPARED FOR:

HOUSING AUTHORITY OF THE COUNTY OF ALAMEDA
22941 ATHERTON STREET
HAYWARD, CALIFORNIA 94541

PREPARED BY:

SCA
ENVIRONMENTAL, INC.

334 19TH STREET
OAKLAND, CA 94612
TEL: (415) 882-1675
FAX: (415) 962-0736

SCA PROJECT NO.: B11167.04

MARCH 2015

SCA
ENVIRONMENTAL, INC.

March 24, 2015

Mr. Tom Makin
Mr. George Smith
Housing Authority of the County of Alameda
22941 Atherton Street
Hayward, California 94541

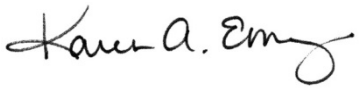
RE: Site Investigation Completion Report
22941 Atherton Street, Hayward, California
ACEH Case File: RO#3152
SCA Project No: B11406

Dear Messers. Makin and Smith:

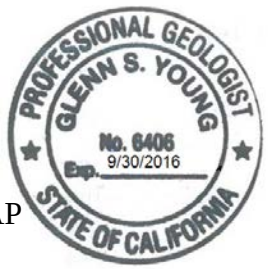
With this letter SCA Environmental, Inc. presents the Site Investigation Completion Report for the property located at 22941 Atherton Street, in Hayward, California. The purpose of our investigation was to assess the presence of petroleum hydrocarbons in the soil and groundwater resulting from historic underground storage tank operations. The general scope of work was presented in the Data Gap Investigation Work Plan and Focused Conceptual Site Model, conditionally approved by the Alameda County Environmental Health, in their letter dated January 14, 2015.

Our findings, opinions, conclusions, and recommendations are based on applicable standards of our profession at the time this report was prepared. Should you have any questions, comments, or require additional information, please contact the undersigned at the numbers listed below.

Sincerely,
SCA ENVIRONMENTAL, INC.



Karen A. Emery, P.G.
Senior Geologist
510-457-1708



Glenn S. Young, P.G., LEED AP
Senior Consultant
510-500-5574

Copies submitted via email: (1 PDF) Addressee
(1 PDF) Mr. Mark Detterman - ACEH

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EXECUTIVE SUMMARY

This report presents the results of site investigation activities conducted by SCA Environmental, Inc. (SCA) for the property located at 22941 Atherton Street in Hayward, California (referred to herein as the Site, Figures 1 and 2). The Site is comprised of an approximately 1.25-acre parcel of land, occupied by one single-story building, owned by the Housing Authority of the County of Alameda (HACA). Potable water in the City of Hayward is ultimately provided to the property by the San Francisco Public Utilities Commission (SFPUC). No water supply or monitoring wells are present at the Site.

During recent building renovations at the Site, four single-walled steel underground storage tanks (USTs) were encountered near the northwestern portion of the existing HACA building. Three USTs were removed and disposed as hazardous waste. Due to its proximity to the building foundation, one 10,500 gallon UST was closed in-place. Data indicate that a fuel release has occurred at the UST area. Based on field observations, SCA presumes that these USTs were used for diesel fuel and gasoline storage. No groundwater was encountered during UST removal activities, which extended to depths of up to 16 feet below ground surface (bgs).

During UST removal activities, primary and reasonably accessible secondary sources of total petroleum hydrocarbon (TPH) contamination in soil were removed. No free phase hydrocarbons were observed however data obtained following UST removal indicates residual impacts of gasoline, diesel, and motor oil range hydrocarbons (TPHg, TPHd, and TPHmo) are present (up to 2,100 milligrams per kilogram [mg/kg], 5,700 mg/kg, and 3,100 mg/kg, respectively). Results of analyses detected no benzene, toluene, or MTBE in soil samples. Detected Naphthalene and Polycyclic Aromatic Hydrocarbon (PAH) concentrations did not exceed the Direct Contact Criteria for a Commercial, Industrial, and Utility Worker (Table 1) presented in the State Water Control Board's (SWRCB) Low Threat Closure Policy (LTCP). SCA summarized the UST removal activities in our report titled *UST Closure Report, Housing Authority of the County of Alameda Property, 22941 Atherton Street, Hayward, California*, dated October 13, 2014.

The purpose of this investigation is to evaluate the lateral and vertical extent of residual petroleum hydrocarbon impacts to soil and groundwater resulting from release(s) associated with the USTs formerly operated at the Site. The general scope of work was presented in the Data Gap Investigation Work Plan and Focused Conceptual Site Model, conditionally approved by the Alameda County Environmental Health (ACEH), in their letter dated January 14, 2015.

At the six borings completed to investigation shallow soil and groundwater conditions at the Site, SCA encountered up to 6-inches of asphalt pavement underlain by mixtures of silty clay, sandy clay and dense fat clay. Due to the presence of dense clays at depth, direct-push drilling operations encountered practical refusal at depths ranging between 40 and 51 feet bgs. SCA utilized a Hydropunch to push through the dense clay to a depth of 68 feet bgs to facilitate the collection of grab groundwater samples. The only significant Photoionization Detector (PID) readings were detected in Borings B-1 and B-6, with the highest PID reading observed at 2,198 parts per million (ppm) in Boring B-6 at a depth of 12 feet bgs. Hydrocarbon odor characterized as aged diesel fuel was encountered in Borings B-1 (17-22 ft bgs) and B-6 (8-26 feet bgs). SCA detected no TPH odors or significant PID readings in soil samples collected below 26 feet bgs at

any of the borings completed at the Site. Groundwater was initially encountered at depths ranging between 54.7 and 67 feet bgs.

Based on our field observations and results of analyses, it is SCA's professional opinion that the Site has been adequately characterized. SCA provides the following conclusions and recommendations:

- Based on the results of the investigation conducted at the site, hydrocarbon impacted soil was identified below and immediately adjacent to the UST area at depths ranging between 8 and 26 feet bgs.

- Based on field observations, and the lack of benzene and toluene concentrations in soil samples, TPH contamination appears to be aged gasoline and/or diesel fuel that will continue to degrade naturally. The highest detected TPHg, TPHd, and TPHmo concentrations are present at B-6 at a depth of 12 feet (located immediately adjacent to the western side of the former USTs), and range up to 1,800 milligrams per kilogram (mg/kg), 6,700 mg/kg, and 3,400 mg/kg, respectively. No benzene, toluene, or MTBE were detected in any of the soil samples analyzed during this investigation. With the exception of 3.4 mg/kg of total xylenes in Sample B-6@12', detected ethylbenzene, total xylenes, naphthalene, and various other PAHs were all below respective commercial land use ESLs and construction worker exposure ESLs. Detected total xylenes in Sample B-6@12' slightly exceeded the commercial land use ESL of 2.3 mg/kg, but was well below the construction worker ESL of 2.500 mg/kg.

- No TPHg, Ethylbenzene, Total Xylenes, MTBE, or Naphthalene were detected in any of the groundwater samples analyzed. Analyses detected TPHd and TPHmo in three out of four samples at concentrations ranging up to 320 micrograms per liter (µg/L) and 1,100 µg/L, respectively (Sample B-1W, below the former UST area). Detected TPHd and TPHmo concentrations slightly exceed respective Tier 1 ESLs of 100 µg/L. No ESLs for the evaluation of a potential vapor intrusion concern have been established for TPHd and TPHmo. No free phase hydrocarbons were observed.

- Benzene (0.53 µg/L) and toluene (0.63 µg/L) were only detected in the grab groundwater sample collected from B-4, at the downgradient/distal end of the site at concentrations below respective Tier 1 ESLs. Detected benzene was below the ESL for a potential vapor intrusion concern. No ESLs for the evaluation of a potential vapor intrusion concern have been established for toluene.

- Detected impacts to soil and groundwater appear limited to the near vicinity of the former UST operations and will continue to degrade over time. The results of this Site Investigation are, in our professional judgment, representative of the soil and groundwater conditions at the Site, and SCA recommends no further investigation at this time. SCA recommends using the findings from this investigation to satisfy the general and media-specific criteria of the SWRCB Low-Threat UST Closure Policy. SCA will present our request for case closure under separate cover.

1.0 INTRODUCTION

This report presents the results of site investigation activities conducted by SCA Environmental, Inc. (SCA) for the property located at 22941 Atherton Street in Hayward, California (referred to herein as the Site, Figures 1 and 2). The Site is comprised of an approximately 1.25-acre parcel of land, occupied by one single-story building, owned by the HACA. Potable water in the City of Hayward is ultimately provided to the property by the SFPUC. No water supply or monitoring wells are present at the Site.

During recent building renovations at the Site, four single-walled steel USTs were encountered near the northwestern portion of the existing HACA building. Three USTs were removed and disposed as hazardous waste. One 10,500 gallon UST was closed in-place to avoid adversely impacting the overlying building and foundation. Data indicate that a fuel release has occurred at the UST area. Based on field observations, SCA presumes that these USTs were used for diesel fuel and gasoline storage. No groundwater was encountered during UST removal activities.

Primary and reasonably accessible secondary sources of total petroleum hydrocarbon contamination in soil were removed during UST removal activities. No free phase hydrocarbons were observed however data indicate residual impacts of TPHg, TPHd, and TPHmo are present (up to 2,100 mg/kg, 5,700 mg/kg, and 3,100 mg/kg, respectively). Results of analyses detected no benzene, toluene, or MTBE in confirmation soil samples. Detected Naphthalene and PAH concentrations did not exceed the Direct Contact Criteria for a Commercial, Industrial, and Utility Worker (Table 1) presented in the RWQCB's LTCP. SCA summarized the UST removal activities in our report titled *UST Closure Report, Housing Authority of the County of Alameda Property, 22941 Atherton Street, Hayward, California*, dated October 13, 2014.

The purpose of this investigation is to evaluate the lateral and vertical extent of residual petroleum hydrocarbon impacts to soil and groundwater resulting from release(s) associated with the USTs formerly operated at the Site. The general scope of work was presented in the Data Gap Investigation Work Plan and Focused Conceptual Site Model, conditionally approved by the ACEH, in their letter dated January 14, 2015 (Appendix A).

2.0 FIELD INVESTIGATION ACTIVITIES

Field activities were conducted using standard industry practices regarding worker health and safety, sample collection and handling, and chain-of-custody documentation.

Prior to commencement of fieldwork, SCA obtained a drilling permit from the Alameda County Public Works Agency (ACPWA), Permit Number W2015-0137. A copy of the permit is presented in Appendix B.

SCA retained a private utility locator to clear all proposed boring locations and alerted the Underground Service Alert (USA) at least 48 hours prior to the start of intrusive field activities. Boring locations are illustrated on Figure 2.

Drilling activities were completed on February 27 and 28, 2015, under the supervision of SCA's field personnel. Cascade Drilling, a State of California licensed drilling contractor (C57 #938110), conducted drilling activities at the Site using direct push, Hydropunch, and/or hand auger methods. SCA completed six (6) borings, B-1 through B-6, to a maximum depth of 68 feet bgs as described below:

- Boring B-1 was completed within the former UST footprint to a depth of 68 feet bgs to evaluate the vertical extent of petroleum hydrocarbon impacts to soil and groundwater at this primary source area.
- Borings B-2 through B-4 at the downgradient limits of the Site to a depth of 68 feet bgs to evaluate the lateral extent of impacts to soil and groundwater downgradient of the former USTs.
- Borings B-5 and B-6 were completed adjacent to the UST that was closed in-place to depths of 20 feet bgs (B-5) and 30 feet bgs (B-6) to evaluate the lateral TPH impacts to soil adjacent to the UST source area.

In general, drilling activities, including continuous soil coring, were completed in general accordance with the ACEH-approved Work Plan with the exception of one minor deviation:

Due to the dense and expansive clays encountered in all borings, direct-push drilling met practical refusal at depths ranging between 40 and 51 feet bgs (depending on boring location), prior to encountering groundwater. Based on the September 2014 groundwater monitoring results for the former Unocal Station #6049, located at 898 A Street in Hayward, California, approximately 0.4-miles north of the Site, depth to groundwater at the Site was anticipated between 62 and 64 feet bgs. Accordingly, to ensure that grab groundwater samples were collected during this investigation, SCA utilized a Hydropunch to push through the dense clays, to a depth of 68 feet bgs, four feet past the anticipated depth to groundwater. This method proved successful and grab groundwater samples were collected from Borings B-1 through B-4. However, since the Hydropunch equipment was utilized, SCA was unable to collect and analyze samples of the capillary fringe at those locations. SCA retained and submitted for analysis soil samples from Borings B-1 through B-4 immediately before refusal was met to evaluate soil conditions close to the capillary fringe. This is considered a minor deviation from the ACEH-approved Work Plan.

SCA also collected additional discrete samples from Borings B-1, B-5, and B-6 to evaluate the vertical extent of TPH impacts at those locations.

SCA's field personnel logged each boring in accordance with the Unified Soil Classification System (USCS) and screened soil samples in the field using a PID which measures the presence of organic vapor such as gasoline and solvents.

Soil samples collected from the hand auger equipment were placed into 8 ounce glass jars, or collected directly in acetate tubes during direct push sampling. Each sample container was filled to avoid headspace. Samples were sealed, labeled, and placed in a chilled ice-chest pending delivery to the chemical testing laboratory.

As previously stated, refusal was met with the direct push rods due to the presence of dense and expansive clays, and a Hydropunch was utilized to reach groundwater at Borings B-1 through B-4. The Hydropunch was pushed through the dense clays, to a depth of 68 feet bgs, four feet past the anticipated depth to groundwater. The Hydropunch was retracted to expose approximately 4 feet of screen and grab groundwater samples were collected using stainless steel bailers through the Hydropunch from all four borings.

Following sample collection, all boring locations were backfilled with a neat cement grout mixture and were patched at the surface with quick-setting concrete under approval from Mr. Steve Miller with ACPWA.

Sampling equipment was decontaminated before and after each use. All investigation-derived waste, including soil cuttings and decontamination water, were placed in DOT-approved 55 gallon drums, which were labeled, and temporarily stored onsite pending offsite disposal.

3.0 SUBSURFACE CONDITIONS

Drilling operations generally encountered up to 6-inches of asphalt pavement underlain by mixtures of silty clay, sandy clay and dense fat clay. Dense clays were encountered at depths ranging between 40 and 51 feet bgs. At location B-1, UST backfill, comprised of brown silty, sandy clay with gravel was encountered to a depth of approximately 16 feet bgs. Logs of borings are presented in Appendix C.

SCA's field representative screened soil samples in the field using a PID. PID readings of significance were limited to Borings B-1 and B-6, with the highest PID reading observed of 2,198 ppm in Boring B-6 at a depth of 12 feet bgs. Hydrocarbon odors of an aged diesel nature were encountered in Borings B-1 (17-22 ft bgs) and B-6 (8-26 feet bgs). No staining or hydrocarbons odors were identified in any other borings completed at the Site.

Groundwater was encountered during the investigation in Borings B-1 through B-4 at depths ranging between 54.7 feet bgs (B-1) and 67 feet bgs (B-4). No free phase hydrocarbons were observed during soil or groundwater sampling. We note that underground utilities are typically installed at depths of less than 10 feet below grade. Accordingly, shallow underground utilities are not anticipated to provide a preferential pathway for contaminant migration.

4.0 CHEMICAL TESTING PROGRAM

The chemical testing program for soil and grab groundwater samples collected from the Site is presented below.

4.1 Soil Samples

SCA submitted soil samples from Borings B-1 through B-4 collected at the depth of refusal to evaluate deeper soil conditions. Samples were submitted from B-1 at 50 ft bgs, B-2 at 44 ft bgs, B-3 at 40 ft bgs, and B-4 at 44 ft bgs. In accordance with the request from ACEH, soil samples collected within the upper 5.0 and 10 feet bgs from Borings B-5 and B-6 were also submitted for analysis to evaluate the presence of MTBE, PAHs, and Naphthalene. Additional soil samples from Borings B-1, B-5, and B-6 were also selected based on field screening with the PID readings and/or based on field indication of contamination. As a result, a total of twelve (12) discrete soil samples were submitted to McCampbell Analytical, Inc., (McCampbell) in Pittsburg, California under chain-of-custody documentation and were analyzed for some or all of the following:

- TPHg, BTEX, and MTBE using Method 8015b/8021B,
- TPHd and TPHmo using Method 8015b, and/or
- PAHs, including Naphthalene, using Method 8270C-SIM.

To profile the drum of soil generated from the investigation, SCA collected two samples from the drum and instructed the laboratory to create a 2:1 composite sample prior to analysis. The 2:1 composite sample was analyzed for LUFT 5 metals using Method 6020. Analytical results of LUFT 5 metals analyses are included with the laboratory report in Appendix C but are not discussed further in this report.

4.2 Grab Groundwater Samples

A total of four (4) grab groundwater samples, B-1W through B-4W were submitted to McCampbell under chain-of-custody documentation and analyzed for the following:

- TPHg, BTEX, and MTBE using Method 8015m/8021B,
- TPHd and TPHmo using Method 8015b, and
- Naphthalene using Method 8260B.

5.0 RESULTS OF ANALYSES

Results of analyses on soil and grab groundwater samples collected from the site are summarized in Tables 1 and 2. Copies of all laboratory results are included in Appendix D.

For the purposes of this report, soil results were compared to the San Francisco Bay Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs) for a commercial land use, as well as ESLs for a construction worker exposure scenario[1]. Groundwater results were compared to the San Francisco Bay RWQCB's Tier 1 ESLs and groundwater screening levels for evaluation of potential vapor intrusion concern.[2]

5.1 Analytical Results – Soil

Results of analyses detected the following:

- No benzene, toluene, or MTBE in the twelve samples analyzed.
- TPHg in four of twelve samples with concentrations ranging from 8.4 mg/kg (B-5@5') to 1,800 mg/kg (B-6@12'), exceeding the commercial land use ESL of 500 mg/kg in the sample from B-6@12'. Detected TPHg concentrations were well below the construction worker ESL of 2,700 mg/kg.
- TPHd in seven of twelve samples with concentrations ranging from 2.4 mg/kg to 6,700 mg/kg, exceeding the commercial land use ESL of 100 mg/kg in Samples B-1@17', B-5@2', and B-6@12', and exceeding construction worker ESL of 900 mg/kg in B-1@17' and B-6@12'.
- TPHmo in six of twelve samples at concentrations ranging from 13 mg/kg to 3,400 mg/kg, exceeding the commercial land use ESL of 500 mg/kg in Samples B-1@17', B-5@2', and B-6@12'. Detected TPHmo were well below the construction worker ESL of 28,000 mg/kg.
- Ethylbenzene was detected in one of twelve samples at 1.6 mg/kg. Total Xylenes were detected in two out of twelve samples at concentration up to 3.4 mg/kg (B-6@12'). Only total xylenes detected in Sample B-6@12' exceeded the commercial land use ESL of 2.3 mg/kg. Detected ethylbenzene and total xylenes were well below respective construction worker ESLs.
- Naphthalene in one of the four samples analyzed with a concentration of 0.034 mg/kg, well below the commercial land use ESL of 1.2 mg/kg and the construction worker ESL of 370 mg/kg.

[1] *Tables A and K-3 of SFRWQCB User's Guide: Derivation and Application of Environmental Screening Levels. Interim Final December 2013.*

[2] Tables Tier 1 and E-1 of SFRWQCB User's Guide: Derivation and Application of Environmental Screening Levels. Interim Final December 2013.

- Various other PAHs including acenaphthene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, fluorine, 1-Methylnaphthalene, 2-Methylnaphthalene, phenanthrene, and pyrene were detected in two out of four samples (B-5@5' and B-6@7.5'). Detected concentrations were well below respective commercial land use ESLs and construction worker ESLs, where established.

5.2 Analytical Results - Grab Groundwater

Analyses of the four grab groundwater samples collected from the site detected the following:

- No TPHg, Ethylbenzene, Total Xylenes, MTBE, or Naphthalene were detected in any of the groundwater samples analyzed.

- TPHd was detected in three of four samples at concentrations ranging from 130 µg/L to 320 µg/L (Sample B-1W, below the UST). TPHmo in three of four samples at concentrations ranging from 390 µg/L to 1,100 µg/L (Sample B-1W, below the UST). Detected TPHd and TPHmo concentrations slightly exceed respective Tier 1 ESLs of 100 µg/L. No ESLs have been established for the evaluation of a potential vapor intrusion concern for TPHd and TPHmo.

- Benzene was only detected in the grab groundwater sample collected from B-4, downgradient of the former UST area. Benzene was detected at a concentration of 0.53 µg/L, below the Tier 1 ESL of 1.0 µg/L and below the ESL for a potential vapor intrusion concern of 270 µg/L.

- Toluene was only detected in the grab groundwater sample collected from B-4, at the downgradient / distal end of the site, at a concentration of 0.63 µg/L, well below the Tier 1 ESL of 40 µg/L. No ESLs for the evaluation of a potential vapor intrusion concern have been established for toluene.

6.0 CONCLUSIONS AND RECOMMENDATIONS

SCA's investigation included the completion of six borings to a maximum depth of 68 feet bgs to evaluate the lateral and vertical extent of residual petroleum hydrocarbon impacts to soil and groundwater resulting from historic fuel releases from the USTs formerly operated at the Site. Based on our field observations and the results of chemical analyses, SCA provides the following conclusions and recommendations.

6.1 Findings for Soil

Hydrocarbon impacted soil was identified below and immediately adjacent to the UST area at depths ranging between 8 and 26 feet bgs.

TPH contamination appears to be aged gasoline and/or diesel that will continue to degrade naturally. Detected TPHg, TPHd, and TPHmo concentrations are highest at B-6, located immediately adjacent to and on the western side of the former USTs, at a depth of 12 feet, and range up to 1,800 mg/kg, 6,700 mg/kg, and 3,400 mg/kg, respectively. No benzene, toluene, or MTBE were detected in any of the soil samples analyzed. With the exception of 3.4 mg/kg of total xylenes in Sample B-6@12', detected ethylbenzene, total xylenes, naphthalene, and various other PAHs were all below respective commercial land use ESLs and construction worker exposure ESLs. Detected total xylenes in Sample B-6@12' slightly exceeded the commercial land use ESL of 2.3 mg/kg, but was well below the construction worker ESL of 2.500 mg/kg.

6.2 Findings for Groundwater

No TPHg, Ethylbenzene, Total Xylenes, MTBE, or Naphthalene concentrations were detected in any of the groundwater samples analyzed.

Analyses detected TPHd and TPHmo in three out of four samples with concentrations ranging up to 320 µg/L and 1,100 µg/L, respectively (Sample B-1W, below the UST). Detected TPHd and TPHmo concentrations slightly exceed respective Tier 1 ESLs of 100 µg/L. No ESLs for the evaluation of a potential vapor intrusion concern have been established for TPHd and TPHmo. No free phase hydrocarbons were observed.

Benzene and toluene were only detected in the grab groundwater sample collected from B-4, downgradient of the former UST area, at concentrations below respective Tier 1 ESLs. Detected benzene was also below the ESL for a potential vapor intrusion concern. No ESLs for the evaluation of a potential vapor intrusion concern have been established for toluene.

6.3 Recommendations

Impacts to soil and groundwater resulting from former UST operations appear limited and will continue to degrade over time. The results of this Site Investigation are, in our professional judgment, representative of the soil and groundwater conditions at the Site, and SCA recommends no further investigation at this time. SCA recommends using the findings from this investigation to satisfy the general and media-specific criteria of the SWRCB's Low-Threat UST Closure Policy. SCA will present our request for case closure under separate cover.

7.0 LIMITATIONS

This document is intended to be used only in its entirety. This report has been prepared for the exclusive use of the Housing Authority of the County of Alameda and Alameda County Environmental Health. No reliance on this report shall be made by anyone other than those for whom it was prepared unless authorized in writing by a Principal of SCA.

SCA's conclusions, recommendations and opinions presented in this report are based solely on the findings of the investigation discussed herein. This report has been prepared in accordance with generally accepted methodologies and standards of practice by environmental professionals performing similar services. No warranty, expressed or implied, is made regarding the findings, conclusions, and recommendations included in the report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities including additional sampling, excavation, construction, etc.

The findings of this report are valid as of the date of the report. SCA's opinions and recommendations regarding environmental conditions as presented herein are based on limited subsurface assessment and chemical analysis. The samples collected and used for testing, and the observations made, are believed to be representative of the areas evaluated; however, conditions can vary significantly between sampling locations. Variations in the subsurface conditions may exist beyond the areas explored in this evaluation. Additionally, Site conditions may change with time, natural processes, or human intervention, which can invalidate the findings and conclusions presented in this report. As such, this report should be considered a reflection of the current site conditions as based on the investigation and remediation completed.

TABLES

Table 1
Summary of Analytical Results - Soil Samples
Housing Authority of the County of Alameda
22941 Atherton Street
Hayward, California

Sample Location		Sample ID: UST Source Area		Immediately Adjacent to UST Source Area							Downgradient Distal Limits of Site			Environmental Screening Levels	
Analyte	**Units**	B-1@17	B1@50	B-5@2	B-5@5	B-5@14	B-6@2	B-6@7.5	B-6@12	B-6@30	B-2@44	B-3@40	B-4@44	Commercial	Construction Worker
Sample Depth (feet bgs)		17	50	2.0	5.0	14	2.0	7.5	12	30	44	40	44		
Date Sampled		2/27/15	2/27/15	2/27/15	2/27/15	2/27/15	2/27/15	2/27/15	2/27/15	2/27/15	2/28/15	2/27/15	2/28/15		
Hydrocarbons															
TPHg	mg/kg	**320**	<1.0	<1.0	**8.4**	<1.0	<1.0	**11**	**1,800**	<1.0	<1.0	<1.0	<1.0	500	2,700
TPHd	mg/kg	**4,200**	<1.0	**170**	**16**	**2.4**	**16**	**44**	**6,700**	<1.0	<1.0	<1.0	<1.0	110	900
TPHmo	mg/kg	**1,900**	<5.0	**2,700**	**13**	<5.0	**260**	**34**	**3,400**	<5.0	<5.0	<5.0	<5.0	500	28,000
VOCs															
Benzene	mg/kg	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.044	71
Toluene	mg/kg	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.9	4,300
Ethylbenzene	mg/kg	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	**1.6**	<0.0050	<0.0050	<0.0050	<0.0050	3.3	490
Total Xylenes	mg/kg	<0.050	<0.0050	<0.0050	**0.027**	<0.0050	<0.0050	<0.0050	**3.4**	<0.0050	<0.0050	<0.0050	<0.0050	2.3	2,500
MTBE	mg/kg	<0.50	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<10	<0.050	<0.050	<0.050	<0.050	0.023	3,800
PAHs															
Acenaphthene	mg/kg	--	--	<0.50	<0.010	--	<0.050	**0.013**	--	--	--	--	--	1.3	NE
Benzo(a)anthracene	mg/kg	--	--	<0.50	**0.018**	--	<0.50	<0.020	--	--	--	--	--	1.3	8.3
Benzo(b)fluoranthene	mg/kg	--	--	<0.50	**0.016**	--	<0.50	<0.010	--	--	--	--	--	1.3	8.3
Benzo (g,h,I) perylene	mg/kg	--	--	<0.50	<0.010	--	<0.50	**0.012**	--	--	--	--	--	27	NE
Chrysene	mg/kg	--	--	<0.50	**0.035**	--	<0.50	<0.010	--	--	--	--	--	13	83
Fluoranthene	mg/kg	--	--	<0.50	**0.020**	--	<0.50	**0.011**	--	--	--	--	--	40	5,700
Fluorene	mg/kg	--	--	<0.50	**0.028**	--	<0.50	**0.039**	--	--	--	--	--	8.9	5,700
1-Methylnaphthalene	mg/kg	--	--	<0.50	**0.081**	--	<0.50	**0.20**	--	--	--	--	--	NE	NE
2-Methylnaphthalene	mg/kg	--	--	<0.50	**0.12**	--	<0.50	**0.083**	--	--	--	--	--	0.25	570
Naphthalene	mg/kg	--	--	<0.50	**0.034**	--	<0.50	<0.030	--	--	--	--	--	1.2	370
Phenanthrene	mg/kg	--	--	<0.50	**0.099**	--	<0.50	**0.031**	--	--	--	--	--	11	NE
Pyrene	mg/kg	--	--	<0.50	**0.025**	--	<0.50	**0.011**	--	--	--	--	--	85	8,600
Remaining PAHs	mg/kg	--	--	ND	ND	--	ND	ND	--	--	--	--	--	varies	varies

Notes

TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
mg/kg = Milligrams per kilogram
Detected concentrations shown in **Bold**
< = Not detected at or above laboratory reporting limit

-- = Not analyzed
ND = Not Detected; reporting limit varies by analyte
NE = Not Established

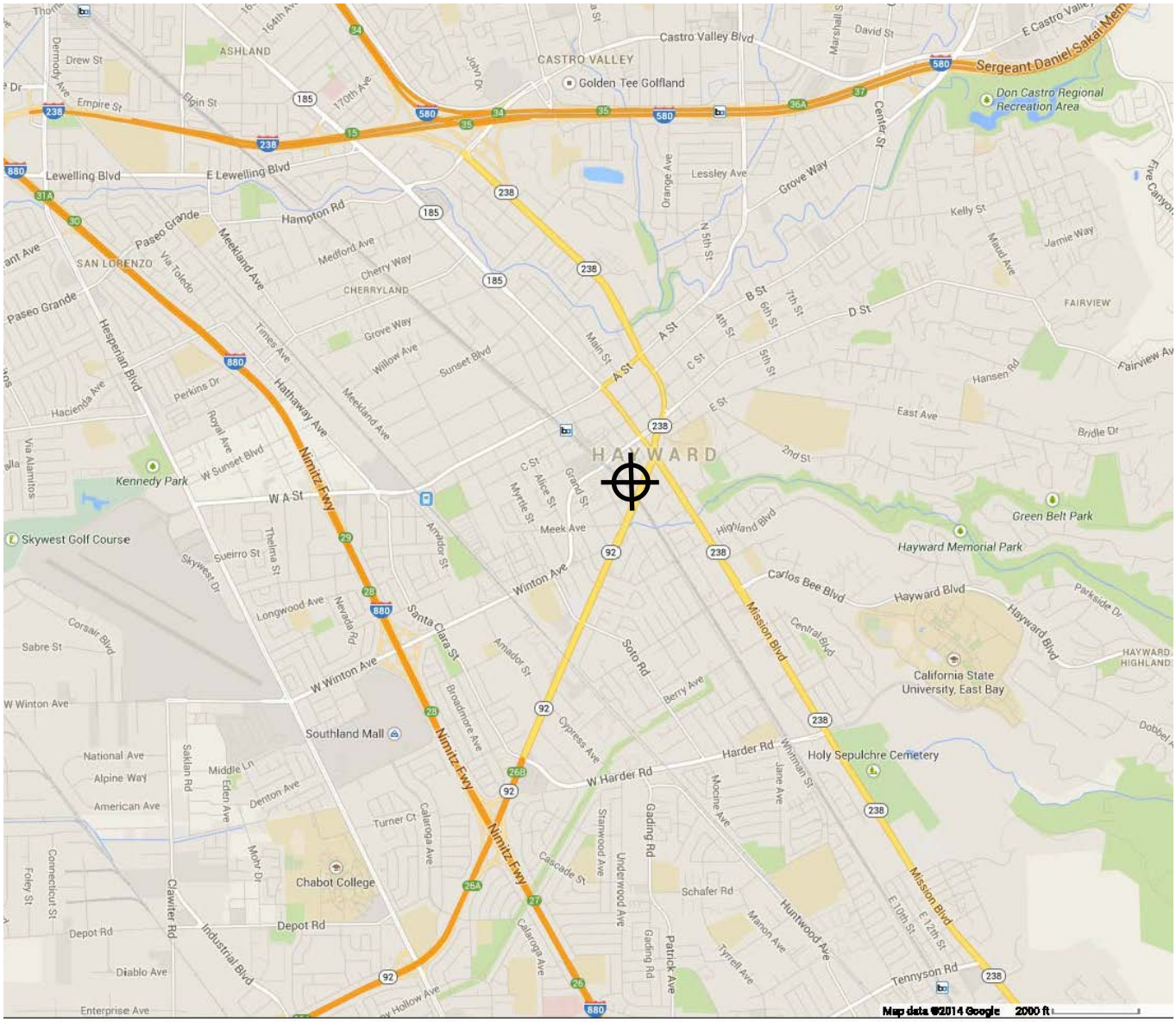
ESLs = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board's User's Guide:
Derivation and Application of Environmental Screening Levels, Interim Final December 2013
Table A (Commercial ESLs) and Table K-3 (Construction Worker ESLs)

Table 2
Summary of Analytical Results - Grab Groundwater Samples
Housing Authority of the County of Alameda
22941 Atherton Street
Hayward, California

		Sample ID					
Sample Location		**UST Source Area**	**Downgradient of UST Source Area**			**Screening Critieria**	
Analyte	**Units**	B-1W	B-2W	B-3W	B-4W	Tier 1 ESLs	ESLs - Evaluation of Potential Vapor Intrusion Concern
Date Sampled		2/27/2015	2/28/2015	2/27/2015	2/28/2015		
Hydrocarbons							
TPHg	µg/L	<50	<50	<50	<50	100	NE
TPHd	µg/L	**320**	<50	**190**	**130**	100	NE
TPHmo	µg/L	**1,100**	<250	**390**	**690**	100	NE
Volatile Organic Compounds							
Benzene	µg/L	<0.50	<0.50	<0.50	**0.53**	1.0	270
Toluene	µg/L	<0.50	<0.50	<0.50	**0.63**	40	NE
Ethylbenzene	µg/L	<0.50	<0.50	<0.50	<0.50	30	3,100
Total Xylenes	µg/L	<0.50	<0.50	<0.50	<0.50	20	NE
MTBE	µg/L	<5.0	<5.0	<5.0	<5.0	5.0	100,000
Naphthalene	µg/L	<0.50	<0.50	<0.50	<0.50	6.1	1,600

Notes
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
µg/L = Micrograms per liter
Detected concentrations shown in **Bold**
< = Not detected at or above laboratory reporting limit
ND = Not Detected; reporting limit varies by analyte
NE = Not Established
ESLs = Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board's User's Guide:
Derivation and Application of Environmental Screening Levels, Interim Final December 2013 (Tier 1 ESL Table and Table E-1)

FIGURES



Source: Google Maps			
LEGEND: Target Property N	SCA ENVIRONMENTAL, INC.	**Vicinity Map** Housing Authority of the County of Alameda 22941 Atherton Street Hayward, California SCA Project No.: B11167.04	Figure 1

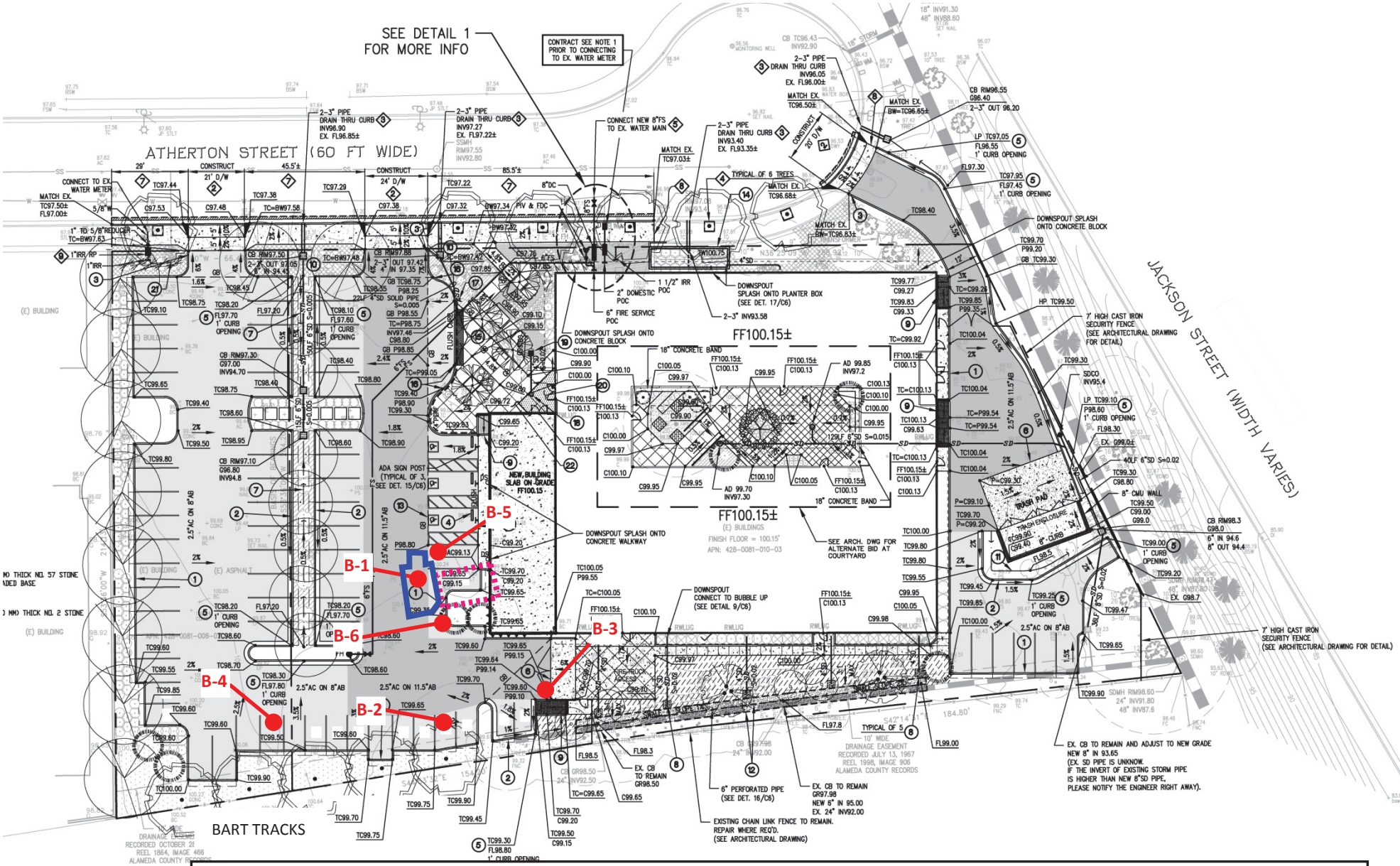


Image Source: Grading and Utility Plan, Alameda County Housing Authority, HACA Office Remodel, Underwood & Rosenblum, Inc., Sheet C3, 2013

SCA ENVIRONMENTAL, INC.

Approximate Site Boundary
Approximate Former UST Area
Approximate Location of UST (closed in place)
Approximate Boring Location

North

1" = 55'
(Approximate Scale)

SITE MAP
Housing Authority of the County of Alameda
22941 Atherton Street
Hayward, California
SCA Project No.: B11167.04

Figure
1

APPENDIX A

WORK PLAN AND ACEH APPROVAL LETTER

SCA

ENVIRONMENTAL, INC.

December 10, 2014

Mr. Mark Detterman, P.G., C.E.G
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Data Gap Investigation Work Plan and Focused Conceptual Site Model
Housing Authority of the County of Alameda Property
22941 Atherton Street, Hayward, California
SCA Project No: B11167.04

Dear Mr. Detterman:

With this letter SCA Environmental, Inc. (SCA) presents this Data Gap Investigation Work Plan to complete a soil and groundwater investigtaion at the subject property. This report was prepared on behalf of the Housing Authority of the County of Alameda (HACA), the current property owner. The purpose of the proposed investigation is to evaluate hydrocarbon impacts to soil and groundwater at the Site. This Work Plan was prepared to address the Alameda County Environmental Health (ACEH) letter dated November 19, 2014.

BACKGROUND

During recent building renovations, four single-walled steel underground storage tanks (USTs) were encountered near the northwestern portion of the existing HACA building. Three USTs were removed and disposed as hazardous waste. One 10,500 gallon UST was closed in-place. Data indicate that a release has occurred at the UST area. Based on field observations, SCA presumes that these USTs were used for diesel fuel and gasoline storage. No groundwater was encountered during UST removal activities.

Primary and reasonably accessible secondary sources of total petroleum hydrocarbon (TPH) contamination in soil were removed. No free phase hydrocarbons were observed however data indicate residual impacts of gasoline, diesel, and motor oil range hydrocarbons (TPHg, TPHd, and TPHmo) are present (up to 2,100 mg/kg, 5,700 mg/kg, and 3,100 mg/kg, respectively). Results of analyses detected no benzene, toluene, or MTBE in confirmation soil samples. Detected Naphthalene and Polycyclic Aromatic Hydrocarbon (PAH) concentrations do not exceed the Direct Contact Criteria for a Commercial, Industrial, and Utility Worker (Table 1) presented in the Regional Water Quality Control Board's (RWQCB) Low Threat Closure Policy (LTCP).

INVESTIGATION WORK PLAN

SCA's investigation will be conducted using standard industry practices regarding worker health and safety (site-specific HSP and tailgate meetings), sample screening, sample collection and handling, chemical testing, and reporting. Prior to commencement of field work, SCA will obtain a drilling permit from the Alameda County Public Works Agency (ACPWA).

SCA will retain a private utility locating company to survey the proposed boring locations. SCA will notify ACEH and Underground Service Alert (USA) a minimum of three days (72 hours) prior to drilling. Drilling activities at the Site will be completed by a licensed C-57 drilling subcontractor using direct push drilling methods.

Soil and Groundwater Investigation

Based on our review of recent groundwater monitoring reports available through the SWRCB's GeoTracker database (see attached Table 1 - Initial Site Conceptual Model) groundwater at the Site is anticipated to be encountered at depths between 55-65 feet bgs. Groundwater flow direction is also anticipated to be toward the southwest.

SCA proposes to complete six (6) borings to evaluate soil and groundwater conditions at the Site. Borings locations are illustrated on the attached Figure 1, and may be adjusted based on accessibility and proximity to existing utilities. The proposed rationale and chemical testing for each boring location is presented in the attached Table 2 – Data Gaps and Proposed Investigation.

SCA's field staff will screen soil samples with a photo-ionization detector (PID) and log each boring in accordance with the Unified Soil Classification System (USCS). Soil samples will be collected using stainless steel or clear acetate liners, sealed with Teflon sheets and plastic end caps, and stored in an ice-chilled cooler pending delivery to the chemical testing laboratory. All drill rods and sampling equipment will be cleaned before and after use to reduce potential cross-contamination between sampling locations.

Upon completion of soil sampling, 1-inch diameter slotted PVC well casing will be installed in each boring to facilitate groundwater sampling. Groundwater samples will be obtained using new disposable bailers and decanted into laboratory prepared containers. Grab groundwater samples will be labeled and stored in a chilled ice chest, and will be transported under chain-of-custody documentation to a state-certified laboratory for testing. Upon completion of sampling, the PVC casings will be removed and the borings will be sealed with neat cement grout according to permit requirements.

To conform with ACEH requirements, we have tabulated the Initial Conceptual Site Model (CSM), and Data Gaps and Proposed Investigation (Tables 1 and 2) describing the Site setting, data gaps, proposed investigation, rationale, and chemical analyses proposed for this investigation.

Waste Management

All investigation-derived waste, including soil cuttings and decontamination water, will be placed in DOT-approved 55 gallon drums, which will be labeled, and temporarily stored onsite pending offsite disposal. SCA will complete a waste profile for the drums, and coordinate pickup and disposal of the waste following our investigation.

Schedule and Reporting

SCA is prepared to proceed with the investigation described herein upon receiving ACEH approval of this Work Plan, and subject to driller availability and procuring the necessary permits. We anticipate that the field investigation will be completed over a two-day period.

SCA will provide ACEH with a report approximately five to six weeks following the completion of the investigation described herein. The report will summarize the field activities and observations, tabulate the results of analyses, include an updated the CSM, and identify any remaining data gaps. Results will be compared to the Cal-EPA's California Human Health Screening Levels (CHHSLs) and/or Environmental Screening Levels (ESLs) issued by the

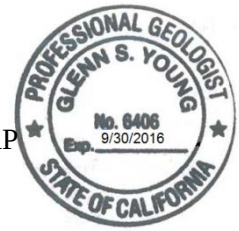
RWQCB, as appropriate, and the General and Media-Specific criteria listed in the RWQCB's LTCP. Copies of the laboratory reports will also be attached. Results of that investigation will be used to evaluate whether the Site is suitable for regulatory case closure using Low Threat Closure protocols or requires additional investigation.

CLOSING

On behalf of the owner, SCA respectfully requests you concurrence with this Work Plan. If you have any questions regarding this Work Plan, please feel free to contact the undersigned.

Sincerely,

SCA ENVIRONMENTAL, INC.



Karen A. Emery, P.G.
Senior Geologist
510-457-1708
kemery@sca-enviro.com

Glenn S. Young, P.G., LEED AP
Principal Geologist
510-500-5574
gyoung@sca-enviro.com

Attachments:
Table 1: Initial Conceptual Site Model
Table 2: Data Gaps and Proposed Investigation
Figure 1: Site Map

Table 1
Initial Conceptual Site Model
Housing Authority of the County of Alameda Property
22941 Atherton Street
Hayward, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Geology and Hydrogeology	Regional	**Geology:** The geologic map titled Geologic Map of the Hayward 7.5 minute Quadrangle, Contra Costa and Alameda Counties, California maps the Site as Surficial Sediments (Qa) of Holocene age. These surficial deposits consist of alluvial gravel, sand and clay of valley areas, including gravel and sand of major stream channels. Regional geology consists of clay with discontinuous lenses of silt, sand, silty sand, sandy silt, sandy gravel and gravel to depths greater than 300 feet.	None	NA
		Hydrogeology: Investigation documents for the former Unocal Station #6049, located at 898 A Street in Hayward, California, approximately 0.4-miles north of the site were procured from the GeoTracker website. Depth to groundwater during the March 2014 groundwater monitoring event varied from 61.5 to 62.5 feet bgs. The groundwater flow direction for this event was toward the east with a relatively flat hydraulic gradient of 0.004 ft/ft, however, previous groundwater monitoring report for the years 2009-2013 indicate a groundwater flow direction at this facility that is generally to the southwest. Groundwater monitoring reports from 2005 for Chevron Station #9-2206, located at 24086 Mission Blvd., and approximately 0.2-miles east of the site were also reviewed. In 2005, depth to water measured in various wells varied between 17.8 and 52.5 feet bgs. Groundwater flow direction was to the southwest with a gradient of 0.2 ft/ft. It should be noted that the over 30 ft difference between groundwater depths may be attributed to a splay of the Hayward fault that traverses through that site. Depth to water measured in November 2013 at the former Arco Station #1319, located at 365 Jackson Street, approximately 0.3-miles south-southwest of the site, reported depth to water varying between 48.13 and 50.07 feet bgs, with a hydraulic gradient of 0.005 ft/ft to the southwest.	None	NA
	Site	**Geology:** Observations during UST removal indicate that shallow soil comprises brown silty clay (CL). Geotechnical borings at the site were shallow (<5') to evaluate pavement conditions.	Site-specific soil conditions are limited to observations during UST removal.	Complete borings to evaluate shallow soil conditions.
		Hydrogeology: The TerraTech letter dated March 11, 1996 for the site indicates that the shallow groundwater gradient is toward the west-southwest.	Site-specific depth to groundwater in unknown	Complete borings to evaluate depth to groundwater.
Surface Water Bodies:		Ward Ceek is located approximatley 710 feet south of the Site.	None	NA
Nearby Wells		The SWQCB's Geotracker GAMA website includes information regarding the approximate locations of water supply wells in California. In the vicinity of the site, the closest identified water supply well is listed at USGS Well SF-39 located approximately 1.53 miles southwest of the site and a water supply well at the Holy Sepulchre Cemetary located approximately 1.6 miles southeast of the site. The nearest shallow monitoring wells are located along Mission Boulevard approximatley 1,000 feet east of the Site.	A formal well survey is needed to identify water-supply wells, monitoring, cathodic protection, and dewatering wells.	If groundwater impacts are confirmed, obtain data for permitted wells from California Department of Water Resources and Zone 7 Water Agency.

Table 2
Data Gaps and Proposed Investigation
Housing Authority of the County of Alameda Property
22941 Atherton Street
Hayward, California

Item	Data Gap	Proposed Investigation	Rationale	Analysis
1	Evaluate the lateral and vertical extent of TPH impacts to shallow soil and groundwater near the source.	Complete three (3) probes near the former UST area.	B-1 will be completed within the former UST area to a maximum depth of 65 feet bgs to evaluate vertical TPH impacts below the former UST. Boring B-5 and B-6 will be completed adjacent to the UST that was closed in-place to a depth of 20 feet bgs to evaluate the lateral TPH impacts adjacent to the UST source area.	**Soil at B-1:** 1 sample from the vadose zone (below the UST, above the capillary zone) to be analyzed for TPHg, TPHd, TPHmo using EPA Test Method 8015m and BTEX using EPA Test Method 8021 **Soil at B-5 & B-6:** 1 sample from each boring within the the upper 10 feet to be analyzed for TPHg, TPHd, TPHmo using EPA Test Method 8015m; BTEX using EPA Test Method 8021; Naphthalene and PAHs using EPA Test Method 8270 ; and 1 sample from collected between 10 and 20 feet bgs to be analyzed for TPHg, TPHd, TPHmo using EPA Test Method 8015m; BTEX using EPA Test Method 8021; **Grab Groundwater at B-1:** TPHg, TPHd, TPHmo using EPA Test Method 8015m. BTEX and Naphthalene using EPA Test Method 8260.
2	Evaluate the lateral extent of TPH impacts to soil and groundwater.	Complete B-2, B-3, and B-4 downgradient of the former UST. Collect soil samples from capillary zone and grab groundwater samples from each of the three (3) proposed borings.	Borings B-2 through B-4 will be completed to a maximum depth of 65 feet bgs. B-2 will completed approximately 65 feet west-southwest of the former USTs to evaluate shallow downgradient groundwater conditions. B-3 will be completed approximately 130 feet south of the former UST to evaluate shallow downgradient groundwater conditions. B-4 will completed approximately 75 feet west of the former UST to evaluate shallow downgradient groundwater conditions.	**Soil at B-2 through B-4:** 1 sample from the capillary zone from each boring to be analyzed for TPHg, TPHd, TPHmo using EPA Test Method 8015m and BTEX using EPA Test Method 8021 **Grab Groundwater at B-2 through B-4:** TPHg, TPHd, TPHmo using EPA Test Method 8015m. BTEX and Naphthalene using EPA Test Method 8260.
3	Evaluate possible soil-vapor impacts to the building	Results of the groundwater investigation will be compared to the ESL for Groundwater Screening Levels for Evaluation of Potential for Vapor Intrusion listed in the RWQCB's ESL Guidance document (Table E-1).	Impacts to groundwater as well as soil types and strata specific to the site are as yet unknown. Exceedance of ESL criteria may warrant further investigation.	NA
4	Obtain information regarding subsurface structures and utilities that may serve as preferntial migration pathways and sources.	None at this stage of the site investigation. This may be re-evaluated once the lateral extent of TPH in groundwater is determined.	No structures or utilities were encountered during UST removal activities. Shallow utilities installed during site improvement did not encounter contamination. The depth to groundwater is likely far deeper than structures and utilities at the Site.	NA

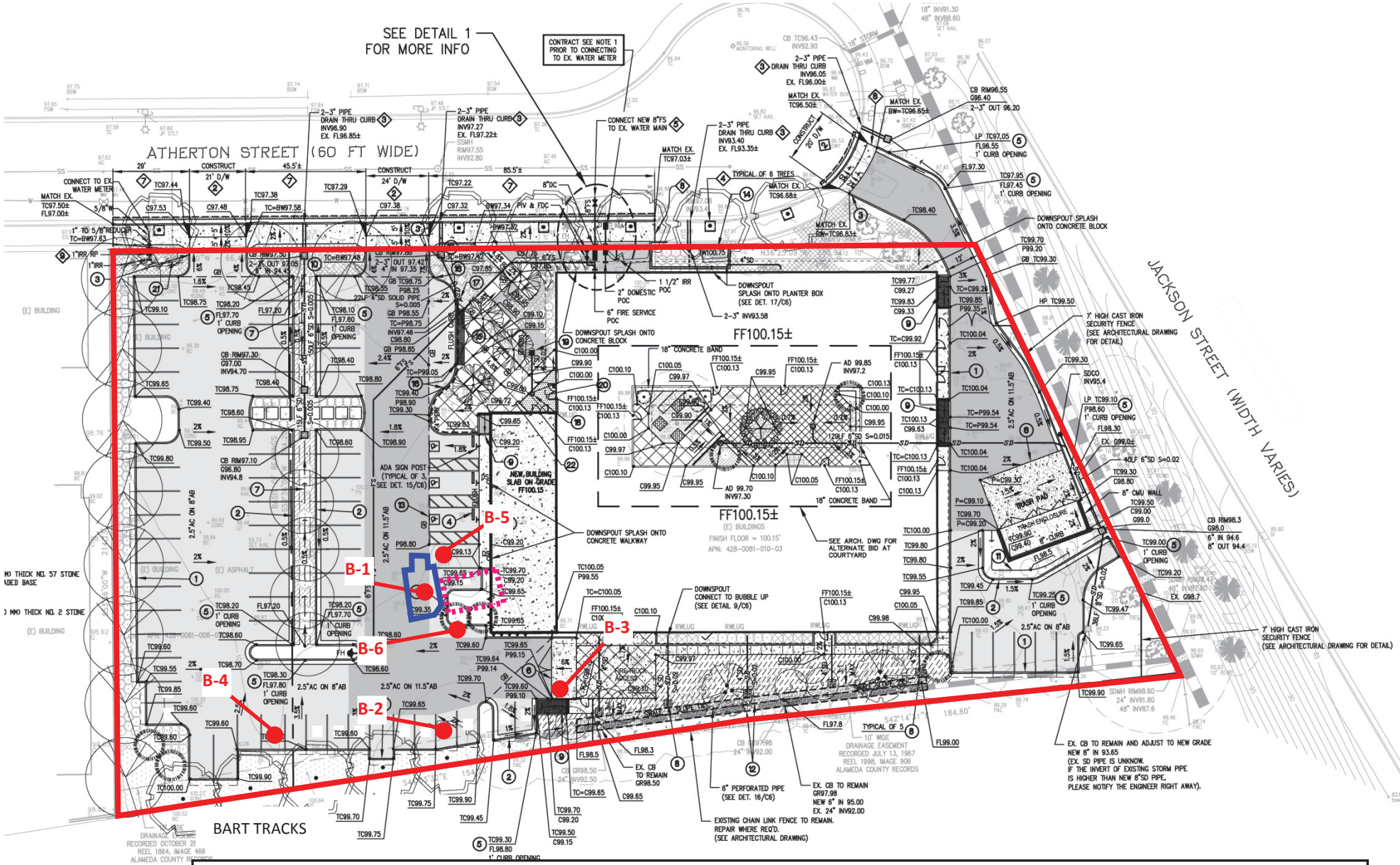


Image Source: Grading and Utility Plan, Alameda County Housing Authority, HACA Office Remodel, Underwood & Rosenblum, Inc., Sheet C3, 2013

SCA ENVIRONMENTAL, INC.

Approximate Site Boundary
Approximate Former UST Area
Approximate Location of UST (closed in place)
Approximate Boring Location

North

1" = 55'
(Approximate Scale)

SITE MAP
Housing Authority of the County of Alameda
22941 Atherton Street
Hayward, California
SCA Project No.: B11167.04

Figure
1

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

January 14, 2015

Mr. George Smith
Housing Authority of County of Alameda
1489 Salmon Way
Hayward, CA 94544
(sent via electronic mail to georges@haca.net)

Subject: Modified Approval of Work Plan; Fuel Leak Case No. RO0003152 and GeoTracker Global ID T10000006327, Housing Authority of County of Alameda, 22941 Atherton Street, Hayward, CA 94541

Dear Mr. Smith:

Alameda County Environmental Health (ACEH) has reviewed the case file, including the *Data Gap Investigation Work Plan and Focused Conceptual Site Model,* dated December 10, 2014, and the email correspondence sent on January 14, 2015, as a work plan addendum. The work plan and addendum was prepared and submitted on your behalf by SCA Environmental, Inc (SCA). The work plan proposed the installation of six soil bores and the collection of grab groundwater samples from temporary wells in each soil bore, and the work plan addendum provided Standard Operating Procedures that will be used and a revised Figure 2 to document a telephone conversation discussing the relocation of soil bore B-3.

Based on ACEH staff review of the work plan, the proposed scope of work is conditionally approved for implementation provided that the technical comments below are incorporated during the proposed work. Submittal of a revised work plan or a work plan addendum is not required unless an alternate scope of work outside that described in the work plan or these technical comments is proposed. We request that you address the following technical comments, perform the proposed work, and send us the report described below. Please provide 72-hour advance written notification to this office (e-mail preferred to: mark.detterman@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Work Plan Modifications –** The referenced work plan proposes a series of actions with which ACEH is in general agreement of undertaking; however, ACEH requests several modifications to the approach. Please submit a report by the date specified below.

    a. **Location of Soil Bore B-3** – As noted ACEH is general agreement with the proposed scope of work; however, as documented and modified in the work plan addendum, verbally requested the relocation of soil bore B-3 approximately 55 – 60 feet north of the initial proposed location, along the western property edge. This was requested in order to limit the extent of a potential groundwater plume to the south of the source locations.

    b. **Soil Sample Selection Protocols** – The work plan proposes to collect and retain for laboratory analysis one soil sample within the upper 10 feet below grade surface (bgs) in soil bores B-5 and B-6. The work plan additionally proposed to collect and submit for laboratory analysis one soil sample within the vadose zone in soil bore B-1. Finally, the work plan proposed to collect one soil sample from the capillary fringe in soil bores B-2 through B-4.

    To characterize the potential for vapor intrusion and for direct contact concerns in the source area, the State Water Resources Control Board's (SWRCBs) Low Threat Underground Storage Tank Case Closure Policy (LTCP) requires the analysis of multiple soil samples in the 0 to 5 and the 5 to 10 foot depth intervals. Consequently ACEH requests that soil samples from both intervals be submitted for laboratory analysis in bores B-5 and B-6.

ACEH additionally requests the collection and analysis of soil samples from soil bores B-1 through B-6 at significant changes in lithology, and at indications of contamination such as photoionization detections, discoloration, and other indications. The collection of capillary fringe soil samples in bores B-2 to B-4 is appropriate. Please also be aware that the LTCP requires the delineation of the vertical extent of soil contamination.

c. **Soil Analytical Suite** – The work plan proposes analysis for Total Petroleum Hydrocarbons (TPH) as gasoline (TPHg), TPH as diesel (TPHd), and TPH as motor oil (TPHmo) by EPA Method 8015M, as well as benzene, toluene, ethylbenzene, total xylenes by EPA Method 8021, and naphthalene and poly-aromatic hydrocarbons (PAHs) by EPA Method 8270. Please additionally include analysis for methyl-tert butyl either (MTBE), normally included at no additional cost.

   The work plan proposes the submittal one soil sample in the upper 10 feet bgs for analysis of naphthalene and PAHs from soil bores B-5 and B-6. Because the LCTP evaluation requires the analysis of naphthalene and PAHs in the 0 to 5 foot depth interval (within the residual source area), ACEH requests the submittal of soil samples from both soil bores in the 5 foot depth interval. Additionally, review of existing PAH analytical data at the site indicates that the reporting limits for PAHs are greater than appropriate LTCP comparison values thus rending an LTCP evaluation incomplete. Consequently, ACEH additionally requests the collection and submittal of soil samples for naphthalene and PAH analysis from bores B-5 and B-6 in the 5 to 10 foot intervals.

d. **Grab Groundwater Analytical Suite** - Please additionally include analysis for MTBE at no additional cost.

TECHNICAL REPORT REQUEST

Please upload technical reports to the ACEH ftp site (Attention: Mark Detterman), and to the State Water Resources Control Board's Geotracker website, in accordance with the following specified file naming convention below and schedule:

- **March 27, 2015** – Site Investigation
  File to be named: RO3152_SWI_R_yyyy-mm-dd

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Should you have any questions, please contact me at (510) 567--6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,

Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, o, ou, email, c=US
Date: 2015.01.14 11:43:54 -08'00'

Mark Detterman, PG, CEG
Senior Hazardous Materials Specialist

Enclosures: Attachment 1 – Responsible Party (ies) Legal Requirements / Obligations and Electronic Report Upload (ftp) Instructions

cc: Glenn Young, SCA Environmental, Inc, 334 19th Street, Oakland, CA 94612, , (sent via electronic mail to: gyoung@sca-enviro.com)
Hugh Murphy, City of Hayward Fire Department, Hazardous Materials Division, 777 B Street, Hayward, CA 94541, (sent via electronic mail to: hughmurphy@hayward-ca.gov)
Dilan Roe, ACEH, (sent via electronic mail to: dilan.roe@acgov.org)
Mark Detterman, ACEH, (sent via electronic mail to mark.detterman@acgov.org)
Electronic File, GeoTracker

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** May 15, 2014
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010, July 25, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:

  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to deh.loptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

DRILLING PERMIT

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 02/20/2015 By jamesy

Permit Numbers: W2015-0137
Permits Valid from 02/27/2015 to 03/01/2015

Application Id: 1423849419523
City of Project Site: Hayward
Site Location: 22941 Atherton Street
Project Start Date: 02/27/2015
Completion Date: 03/01/2015

Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

Applicant: SCA Environmental Inc - Karen Emery
334 19th Street, Oakland, CA 94612
Phone: 510-457-1708

Property Owner: Housing Authority of the County of Alameda
24941 Atherton Street, Hayward, CA 94541
Phone: 510-727-8510

Client: Housing Authority of the County of Alameda
24941 Atherton Street, Hayward, CA 94541
Phone: 510-727-8510 x

Total Due: $265.00
Receipt Number: WR2015-0070 **Total Amount Paid:** $265.00
Payer Name : Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 6 Boreholes
Driller: Cascade Drilling, L.P. - Lic #: 938110 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2015-0137	02/20/2015	05/28/2015	6	2.00 in.	65.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

6. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX C

LOGS OF BORINGS B-1 THROUGH B-6

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-1 Logged By: TK/CH Sheet 1 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 07:28	2/27/15 09:58

Site Location:	Groundwater:
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling 54' 7" feet bgs ▼ GW Level Stabilized / After Completion Not Measured

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core			GW	4" Asphalt pavement
			HA			GP	Brown/grey partly graded GRAVELY SAND. No odor. No staining. Subangular gravel. Dry
1							
						GC	Brown CLAYEY GRAVEL with SAND. Medium size subangular gravel. No odor. No statining. Dry
2	B-1 @ 2	G		0.1			
						CL	Light brown/yellow brown SILTY CLAY WITH GRAVEL. Medium size subangular gravel. No odor, no staining. Dry
3							
4							
			↓				
5	B-1 @ 5	G	DP	0			
6							
7							
	B-1@7.5	T					
8							
9							
10	B-1 @ 10	T		25.3			
11							
12	B-1 @ 12	G		58.4			- change to small subangular gravel. Slight hydrocarbon odor.
13							
14							
15							
16	B-1 @ 16	T		98.9		↓	
						CL	Brown/grey SILTY CLAY. Small subangular gravel. Moderate hydrocarbon odor, grey staining. Moist.
17	B-1 @ 17	G		202.1			
18							
19							
			↓				

Drilling Company / Driller Name:	Hammer Type: N/A	Comments:
Cascade Drilling / Art	Concrete Coring: 0' to 4" Dia: 4"	
Drill Rig: Geoprobe 6600	Hand Auger: 4" to 5' Dia: 4"	
Backfill Date / Time / Type: 2/27/15 15:30	Direct Push: 5' to 51' Dia: 2"	
Neat Cement Grout/Concrete Patch	Hydropunch: 50' to 68' Dia: 1"	
	Rotary Wash: _____ to _____ Dia: _____	

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-1 Logged By: TK/CH Sheet 2 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 07:28	2/27/15 09:58

Site Location: HACA 22941 Atherton, Hayward, CA

Groundwater:
▽ GW Level First Encountered During Drilling 54' 7" feet bgs
▼ GW Level Stabilized / After Completion Not Measured

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
20	B-1 @ 20	T	DP	11.6		CL	
21							
22	B-1 @ 22	G		0.4		CL	Brown SILTY CLAY. No gravel. No odor, no staining. Moist.
23							
24							
25							
26	B-1 @ 26	T		0.3			
27							
28	B-1 @ 28	T		0			
29							
30							
31							
32	B-1 @ 32			0			- Some subangular gravel.
33							
34							
35							
36	B-1 @ 36			0			
37							
38							
39							
40							
41							
42	B-1 @ 42			0		CH	Brown FAT CLAY with high plasticity. No gravel. No odor, no staining. Moist.

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-1 Logged By: TK/CH Sheet 3 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27 07:28	2/27/15 09:58

Site Location:	Groundwater:			
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	54'	7"	feet bgs
	▼ GW Level Stabilized / After Completion			feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
43			DP				
44							
							- Difficult Drilling
45							
46	B-1 @ 46	T		0			
47							
48							- Liner stuck in direct push rod due to dense, expansive clays. Sample liner eventually recovered.
49							
50	B-1 @ 50			0			
			↓			↓	End of Direct Push Drilling
51			HP				Begin Hydropunch to 4 feet below anticipated depth of groundwater
52							
53							
54							
							▽ GW Encountered
55							
56							
57							
58							
59							
60							- Difficult Drilling
61							
62							
63							
64							
65							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-1 Logged By: TK/CH Sheet 4 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27 07:28	2/27/15 09:58

Site Location:	Groundwater:			
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	54'	7"	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured		feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
66			HP				
			↓				
67							
			↓				
68							Boring Terminated at 68 feet bgs
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-2 Logged By: TK/CH Sheet 1 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 9:37	2/28/15 10:45

Site Location: HACA 22941 Atherton, Hayward, CA

Groundwater:
- GW Level First Encountered During Drilling 55' 6" feet bgs
- GW Level Stabilized / After Completion Not Measured

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core				4" Asphalt pavement
			HA			GM	Yellow-brown SILTY GRAVEL, subangular gravel. No staining, No odor. Dry.
1							
2	B-2 @ 2	G		0			
						CL	Brown SILTY CLAY. Occassional subangular gravel. No odor, no staining. Damp.
3							
4							
			↓				
5	B-2 @ 5	G	DP	0			- color change to yellow brown
6							
7							
	B-2 @7.5	T		0			
8							
9							
10	B-2 @ 10	T		0			
11							
12							
13							
14	B-2 @ 14	T		0			
15							
16	B-2 @ 16	T		0			
17							
18							
19							
			↓			↓	

Drilling Company / Driller Name: Cascade Drilling / Art

Drill Rig: Geoprobe 6600

Backfill Date / Time / Type: 2/28/15 11:05 Neat Cement Grout/Concrete Patch

Hammer Type: N/A

Concrete Coring: 0' to 4" Dia: 4"
Hand Auger: 4" to 5' Dia: 4"
Direct Push: 5' to 44' Dia: 2"
Hydropunch: 44' to 68' Dia: 1"
Rotary Wash: _____ to _____ Dia: _____

Comments:

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-2 Logged By: TK/CH Sheet 2 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 9:37	2/28/15 10:45

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	55' 6"	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
20	B-2 @ 20		DP	0		CL	
24	B-2 @ 24	T		0		CL	Brown SANDY CLAY, low plasticity. No odor, no staining. Damp.
28	B-2 @ 28	T		0			
30	B-2 @ 30	T		0		CH	Brown FAT CLAY, medium-high plasticity. No odor, no staining. Damp.
34	B-2 @ 34	T		0		CL	Brown SANDY CLAY, low plasticity. No odor, no staining. Damp.
40	B-2 @ 40	T		0			

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-2 Logged By: TK/CH Sheet 3 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 9:37	2/28/15 10:45

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	55' 6"	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
43			DP				
						CH	Brown FAT CLAY, high plasticity. No odor, no staining. Moist.
44	B-2 @ 44	T		0			
							End of Direct Push Drilling
45			HP				Begin Hydropunch to 4 feet below anticipated depth of groundwater
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							▽
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. ___B-2_________ Logged By: _TK/CH_________ Sheet_4___ of _4__

Project Name: HACA UST Additional Sampling	Project No.: B11167	Start Date / Time: 2/28/15 9:37	End Date / Time: 2/28/15 10:45
Site Location: HACA 22941 Atherton, Hayward, CA	Groundwater: ▽ GW Level First Encountered During Drilling 55' 6" feet bgs; ▼ GW Level Stabilized / After Completion Not Measured		

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
66			HP ↓				
67							
68							Boring Terminated at 68 feet bgs
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-3 Logged By: TK/CH Sheet 1 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 07:40	2/27/15 11:54

Site Location: HACA 22941 Atherton, Hayward, CA

Groundwater:
- GW Level First Encountered During Drilling 59' feet bgs
- GW Level Stabilized / After Completion Not Measured feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core				4" Asphalt pavement
			HA			GW	Brown partly graded GRAVELY SAND. Small subangular gravel. No odor, no staining. Dry
1							
						CL	Dark brown SILTY CLAY med-low plasticity. Brick fragmants, medium subangular gravel. No odor, no staining. Moist.
2	B-3 @ 2	G		0.1			
3							
4						CL	Light brown/yellow SILTY CLAY with sand and medium subangular gravel. Low plasticity. No odor, no staining. Moist
5	B-3 @ 5	G	DP	0			
6							
7							
	B-3@7.5	T		0			
8							
9							
10	B-3 @ 10	T		0			
11							
12							
13							
14	B-3 @ 14	T		0.1			
15							
16							
17							
18	B-3 @ 18	T		0			
19							

Drilling Company / Driller Name: Cascade Drilling / Art

Drill Rig: Geoprobe 6600

Backfill Date / Time / Type: 2/27/15 15:30 Neat Cement Grout/Concrete Patch

Hammer Type: N/A

Concrete Coring: 0' to 4" Dia: 4"
Hand Auger: 4" to 5' Dia: 4"
Direct Push: 5' to 40' Dia: 2"
Hydropunch: 40' to 68' Dia: 1"
Rotary Wash: _____ to _____ Dia: _____

Comments:

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-3 Logged By: TK/CH Sheet 2 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 07:40	2/27/15 11:54

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	59	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
20			DP			CL	
21							
22							
23							
24	B-3 @ 24	T		0			
25							
26							
27							
28	B-3 @ 28	T		0			
29							
30							
31	B-3 @ 31	T		0			
32	B-3 @ 32	T		0		CH	Dark brown FAT CLAY, high plasticity. No gravel. No odor, no staining. Moist.
33							
34							
35							
36	B-3 @ 36	T		0			
37							
38	B-3 @ 38	T		0			
39							
							End of Direct Push Drilling
40	B-3 @ 40		HP	0			Begin Hydropunch to 4 feet below anticipated depth of groundwater
41							
42							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-3 Logged By: TK/CH Sheet 3 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 07:40	2/27/15 11:54

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	59	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
43			HP				
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
							▽
59							
60							
61							
62							
63							
64							
65							
			↓				

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. ___B-3_________ Logged By: _TK/CH_________ Sheet_4___ of _4__

Project Name: HACA UST Additional Sampling	Project No.: B11167	Start Date / Time: 2/27/15 07:40	End Date / Time: 2/27/15 11:54
Site Location: HACA 22941 Atherton, Hayward, CA	Groundwater: GW Level First Encountered During Drilling 59 feet bgs; GW Level Stabilized / After Completion Not Measured feet bgs		

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
66			HP				
67			↓				
68							Boring Terminated at 68 feet bgs
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-4 Logged By: TK/CH Sheet 1 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 08:01	2/28/15 09:21

Site Location: HACA 22941 Atherton, Hayward, CA

Groundwater:
- GW Level First Encountered During Drilling 67' feet bgs
- GW Level Stabilized / After Completion Not Measured feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core				4" Asphalt Pavement
			HA			GM	Brown SILTY GRAVEL. Medium subangular gravel. No odor, no staining. Dry
1							
						CL	Brown/yellow brown SILTY CLAY with medium subangular gravel. No odor, no staining. Dry
2	B-4 @ 2	G		0.8			
3							
4							
			↓				
5	B-4 @ 5	G	DP	0.4			
6							
7							
	B-4@7.5	T		0.6			
8							
9							
10	B-4 @ 10	T		0.2			
11							
12							
13							
14							
15							
16	B-4 @ 16	T		0.2			
17							
18							
19							
			↓				

Drilling Company / Driller Name: Cascade Drilling / Art

Drill Rig: Geoprobe 6600

Backfill Date / Time / Type: 2/28/15 11:05 Neat Cement Grout/Concrete Patch

Hammer Type: N/A

Concrete Coring: 0' to 4" Dia: 4"
Hand Auger: 4" to 5' Dia: 4"
Direct Push: 5' to 44' Dia: 2"
Hydropunch: 44' to 68' Dia: 1"
Rotary Wash: _____ to _____ Dia: _____

Comments:

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-4 Logged By: TK/CH Sheet 2 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 08:01	2/28/15 09:21

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	67'	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
20	B-4 @ 20	T	DP	0.1		CL	Brown/yellow brown SILTY CLAY with medium subangular gravel. No odor, no staining. Dry
21							
22							
23	B-4 @ 23	T		0			
24							
25							
26							
27							
28	B-4 @ 28	T		0			
29							
30	B-4 @ 30	T		0		CH	Brown FAT CLAY with medium-high plasticity. No gravel. No odor, no staining. Moist.
31							
32	B-4 @ 32	T		0.7			
33							
34							
35							
36	B-4 @ 36	T		0.2			
37							
38							
39							
40	B-4 @ 40	T		0.2		SM	Yellow-brown SILTY SAND, poorly graded. No odor, no staining. Moist.
41							
42	B-4 @ 42	T		0.6			

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-4 Logged By: TK/CH Sheet 3 of 4

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/28/15 08:01	2/28/15 09:21

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	67'	feet bgs
	▼ GW Level Stabilized / After Completion	Not Measured	feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
43			DP				
			↓			CH	Brown FAT CLAY, high plasticity. No odor, no staining. Moist.
44	B-4 @ 44	T	↓	0.6			End of Direct Push Drilling
			HP				Begin Hydropunch to 4 feet below anticipated depth of groundwater
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
			↓				

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. ___B-4_________ Logged By: _TK/CH_________ Sheet_4___ of _4__

Project Name: HACA UST Additional Sampling	Project No.: B11167	Start Date / Time: 2/28/15 08:01	End Date / Time: 2/28/15 09:21
Site Location: HACA 22941 Atherton, Hayward, CA	Groundwater: ▽ GW Level First Encountered During Drilling 67' feet bgs; ▼ GW Level Stabilized / After Completion Not Measured feet bgs		

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
66			HP				
			↓				
67			↓				▽
			↓				
68							Boring Terminated at 68 feet bgs
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-5 Logged By: TK/CH Sheet 1 of 1

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 13:15	2/27/15 14:01

Site Location:	Groundwater:
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling NE feet bgs ▼ GW Level Stabilized / After Completion NE feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core				4" Asphalt pavement
			HA			GM	Brown SILTY GRAVEL. Medium subangular gravel. No odor, no staining. Dry.
1							
2	B-5 @ 2	G		2.4			
3						CL	Dark brown SILTY CLAY, fragments of brick. No odor, no staining. Damp.
4							
5	B-5 @ 5	G	DP	7.9		CL	Dark brown / grey SILTY CLAY. Grey staining and slight hydrocarbon odor. Damp.
6							
7							
	B-5@7.5						
8							
9							
10	B-5 @ 10	T		0.6		CL	Brown/light brown/yellow SILTY CLAY. No odor, no staining. Dry
11							
12							
13							
14	B-5 @ 14	T		0.3			
15							
16	B-5 @ 16	T		0.2			
17							
18							
19							
	B-5@19.5	T		0.1			
20							Boring Terminated at 20 feet bgs

Cascade Drilling / Art

Drill Rig: Geoprobe 6600

Backfill Date / Time / Type: 2/27/15 15:30 Neat Cement Grout/Concrete Patch

Hammer Type: N/A

Concrete Coring: 0' to 4" Dia: 4"

Hand Auger: 4" to 5' Dia: 4"

Direct Push: 5' to 20' Dia: 2"

Hydropunch: to Dia:

Rotary Wash: to Dia:

Comments:

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-6 Logged By: TK/CH Sheet 1 of 2

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 12:35	2/27/15 14:30

Site Location: HACA 22941 Atherton, Hayward, CA

Groundwater:
- GW Level First Encountered During Drilling: NE feet bgs
- GW Level Stabilized / After Completion: NE feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
0			Core				4" Asphalt pavement
			HA			GM	Brown SILTY GRAVEL. Medium subangular gravel. No odor, no staining. Dry.
1							
2	B-6 @ 2	G		0.5		CL	Dark brown SILTY CLAY, medium plasticidy. No staining, no odor. Damp.
3							
4							
5	B-6 @ 5	G	DP	0			
6	B-6 @ 6	G		1.9		CL	Grey SILTY CLAY. Grey staining and hydrocarbon odor. Moist
7							
	B-6@7.5	T		31.5			
8							
9							
10	B-6 @ 10	T		1904			
11							
12	B-6 @ 12	T		2198			
13							
14	B-6 @ 14	T		1914			
15							
16	B-6 @ 16	T		333			
17							
18	B-6 @ 18	T		295			
19							

Drilling Company / Driller Name: Cascade Drilling / Art

Drill Rig: Geoprobe 6600

Backfill Date / Time / Type: 2/27/15 15:30 Neat Cement Grout/Concrete Patch

Hammer Type: N/A

Concrete Coring: 0' to 4" Dia: 4"

Hand Auger: 4" to 5' Dia: 4"

Direct Push: 5' to 20' Dia: 2"

Hydropunch: to Dia:

Rotary Wash: to Dia:

Comments:

SCA ENVIRONMENTAL, INC. BORING LOG Boring ID No. B-6 Logged By: TK/CH Sheet 2 of 2

Project Name:	Project No.:	Start Date / Time:	End Date / Time:
HACA UST Additional Sampling	B11167	2/27/15 12:35	2/27/15 14:30

Site Location:	Groundwater:		
HACA 22941 Atherton, Hayward, CA	▽ GW Level First Encountered During Drilling	NE	feet bgs
	▼ GW Level Stabilized / After Completion	NE	feet bgs

DEPTH	SAMPLE ID NO.	SAMPLE TYPE (GRAB / TUBE)	DRILLING METHOD (HA / DP / HSA)	PID (PPM)	Radiation Detection mR/hr	USCS CLASSIFICATION	LITHOLOGICAL DESCRIPTION
20	B-6 @ 20	T	DP	157.1		CL	
21							
22	B-6 @ 22	T		1244		CH	Grey FAT CLAY, high plasticity. Grey staining, hydrocarbon odor. Moist
23							
24	B-6 @ 24	T		381.1		CL	Grey SILTY CLAY, staining and hydrocarbon odor. Moist
25							
26	B-6 @ 26	T		117.2			
27							
28	B-6 @ 28	T		7.4		CL	Brown SILTY CLAY, little to no gravel. No staining, no odor. Damp
29							
	B-6 @ 29.5	T		2.2			
30							Boring Terminated at 30 feet bgs
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							

APPENDIX D

ANALYTICAL LABORATORY REPORT

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1503027

Report Created for: SCA Environmental, Inc.
650 Delancey Street, #222
San Francisco, CA 94107

Project Contact: Karen Emery
Project P.O.:
Project Name: #B11167.04; HACA UST Services

Project Received: 03/02/2015

Analytical Report reviewed & approved for release on 03/06/2015 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com
NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

McCampbell Analytical, Inc.
"When Quality Counts"

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: SCA Environmental, Inc.
Project: #B11167.04; HACA UST Services
WorkOrder: 1503027

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifiers

a3	sample diluted due to high organic content.
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
e1	unmodified or weakly modified diesel is significant
e2	diesel range compounds are significant; no recognizable pattern
e3	aged diesel is significant
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8260B
Date Prepared:	3/3/15	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1W	**1503027-002C**	**Water**	**02/27/2015 09:55**	**GC38**	**101839**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	03/03/2015 00:10
Surrogates	**REC (%)**	**Limits**		
4-BFB	84	69-114		03/03/2015 00:10

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2W	**1503027-003C**	**Water**	**02/28/2015 10:51**	**GC38**	**101839**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	03/03/2015 00:48
Surrogates	**REC (%)**	**Limits**		
4-BFB	84	69-114		03/03/2015 00:48

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3W	**1503027-004C**	**Water**	**02/27/2015 11:30**	**GC38**	**101839**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	03/03/2015 01:26
Surrogates	**REC (%)**	**Limits**		
4-BFB	84	69-114		03/03/2015 01:26

Analyst(s): KF

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4W	**1503027-005C**	**Water**	**02/28/2015 11:43**	**GC38**	**101839**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	03/03/2015 02:03
Surrogates	**REC (%)**	**Limits**		
4-BFB	84	69-114		03/03/2015 02:03

Analyst(s): KF

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8270C-SIM
Date Prepared:	3/3/15	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@2	**1503027-011A**	**Soil**	**02/27/2015 13:18**	**GC35**	**101811**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.50	50	03/03/2015 22:45
Acenaphthylene	ND	0.50	50	03/03/2015 22:45
Anthracene	ND	0.50	50	03/03/2015 22:45
Benzo (a) anthracene	ND	0.50	50	03/03/2015 22:45
Benzo (b) fluoranthene	ND	0.50	50	03/03/2015 22:45
Benzo (k) fluoranthene	ND	0.50	50	03/03/2015 22:45
Benzo (g,h,i) perylene	ND	0.50	50	03/03/2015 22:45
Benzo (a) pyrene	ND	0.50	50	03/03/2015 22:45
Chrysene	ND	0.50	50	03/03/2015 22:45
Dibenzo (a,h) anthracene	ND	0.50	50	03/03/2015 22:45
Fluoranthene	ND	0.50	50	03/03/2015 22:45
Fluorene	ND	0.50	50	03/03/2015 22:45
Indeno (1,2,3-cd) pyrene	ND	0.50	50	03/03/2015 22:45
1-Methylnaphthalene	ND	0.50	50	03/03/2015 22:45
2-Methylnaphthalene	ND	0.50	50	03/03/2015 22:45
Naphthalene	ND	0.50	50	03/03/2015 22:45
Phenanthrene	ND	0.50	50	03/03/2015 22:45
Pyrene	ND	0.50	50	03/03/2015 22:45

Surrogates	REC (%)	Limits	Analytical Comments: a3	
1-Fluoronapthalene	104	30-130		03/03/2015 22:45
2-Fluorobiphenyl	101	30-130		03/03/2015 22:45

Analyst(s): HK

(Cont.)

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8270C-SIM
Date Prepared:	3/3/15	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@5	**1503027-012A**	**Soil**	**02/27/2015 13:20**	**GC35**	**101811**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/03/2015 21:30
Acenaphthylene	ND	0.010	1	03/03/2015 21:30
Anthracene	ND	0.010	1	03/03/2015 21:30
Benzo (a) anthracene	**0.018**	0.010	1	03/03/2015 21:30
Benzo (b) fluoranthene	**0.016**	0.010	1	03/03/2015 21:30
Benzo (k) fluoranthene	ND	0.010	1	03/03/2015 21:30
Benzo (g,h,i) perylene	ND	0.010	1	03/03/2015 21:30
Benzo (a) pyrene	ND	0.010	1	03/03/2015 21:30
Chrysene	**0.035**	0.010	1	03/03/2015 21:30
Dibenzo (a,h) anthracene	ND	0.010	1	03/03/2015 21:30
Fluoranthene	**0.020**	0.010	1	03/03/2015 21:30
Fluorene	**0.028**	0.010	1	03/03/2015 21:30
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/03/2015 21:30
1-Methylnaphthalene	**0.081**	0.010	1	03/03/2015 21:30
2-Methylnaphthalene	**0.12**	0.010	1	03/03/2015 21:30
Naphthalene	**0.034**	0.010	1	03/03/2015 21:30
Phenanthrene	**0.099**	0.010	1	03/03/2015 21:30
Pyrene	**0.025**	0.010	1	03/03/2015 21:30

Surrogates	REC (%)	Limits	
1-Fluoronapthalene	100	30-130	03/03/2015 21:30
2-Fluorobiphenyl	98	30-130	03/03/2015 21:30

Analyst(s): HK

(Cont.)

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8270C-SIM
Date Prepared:	3/3/15	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@2	**1503027-014A**	**Soil**	**02/27/2015 12:45**	**GC35**	**101811**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.050	5	03/03/2015 22:20
Acenaphthylene	ND	0.050	5	03/03/2015 22:20
Anthracene	ND	0.050	5	03/03/2015 22:20
Benzo (a) anthracene	ND	0.050	5	03/03/2015 22:20
Benzo (b) fluoranthene	ND	0.050	5	03/03/2015 22:20
Benzo (k) fluoranthene	ND	0.050	5	03/03/2015 22:20
Benzo (g,h,i) perylene	ND	0.050	5	03/03/2015 22:20
Benzo (a) pyrene	ND	0.050	5	03/03/2015 22:20
Chrysene	ND	0.050	5	03/03/2015 22:20
Dibenzo (a,h) anthracene	ND	0.050	5	03/03/2015 22:20
Fluoranthene	ND	0.050	5	03/03/2015 22:20
Fluorene	ND	0.050	5	03/03/2015 22:20
Indeno (1,2,3-cd) pyrene	ND	0.050	5	03/03/2015 22:20
1-Methylnaphthalene	ND	0.050	5	03/03/2015 22:20
2-Methylnaphthalene	ND	0.050	5	03/03/2015 22:20
Naphthalene	ND	0.050	5	03/03/2015 22:20
Phenanthrene	ND	0.050	5	03/03/2015 22:20
Pyrene	ND	0.050	5	03/03/2015 22:20

Surrogates	REC (%)	Limits	Analytical Comments: a3	
1-Fluoronapthalene	107	30-130		03/03/2015 22:20
2-Fluorobiphenyl	110	30-130		03/03/2015 22:20

Analyst(s): HK

(Cont.)

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8270C-SIM
Date Prepared:	3/3/15	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode by GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@7.5	**1503027-015A**	**Soil**	**02/27/2015 12:54**	**GC35**	**101811**

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	**0.013**	0.010	1	03/03/2015 21:55
Acenaphthylene	ND	0.010	1	03/03/2015 21:55
Anthracene	ND	0.010	1	03/03/2015 21:55
Benzo (a) anthracene	ND	0.020	1	03/03/2015 21:55
Benzo (b) fluoranthene	ND	0.010	1	03/03/2015 21:55
Benzo (k) fluoranthene	ND	0.010	1	03/03/2015 21:55
Benzo (g,h,i) perylene	**0.012**	0.010	1	03/03/2015 21:55
Benzo (a) pyrene	ND	0.010	1	03/03/2015 21:55
Chrysene	ND	0.010	1	03/03/2015 21:55
Dibenzo (a,h) anthracene	ND	0.010	1	03/03/2015 21:55
Fluoranthene	**0.011**	0.010	1	03/03/2015 21:55
Fluorene	**0.039**	0.010	1	03/03/2015 21:55
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/03/2015 21:55
1-Methylnaphthalene	**0.20**	0.010	1	03/03/2015 21:55
2-Methylnaphthalene	**0.083**	0.010	1	03/03/2015 21:55
Naphthalene	ND	0.030	1	03/03/2015 21:55
Phenanthrene	**0.031**	0.010	1	03/03/2015 21:55
Pyrene	**0.011**	0.010	1	03/03/2015 21:55

Surrogates	REC (%)	Limits	
1-Fluoronapthalene	110	30-130	03/03/2015 21:55
2-Fluorobiphenyl	103	30-130	03/03/2015 21:55

Analyst(s): HK

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1@17	**1503027-006A**	**Soil**	**02/27/2015 08:28**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**320**	10	10	03/03/2015 16:33
MTBE	ND	0.50	10	03/03/2015 16:33
Benzene	ND	0.050	10	03/03/2015 16:33
Toluene	ND	0.050	10	03/03/2015 16:33
Ethylbenzene	ND	0.050	10	03/03/2015 16:33
Xylenes	ND	0.050	10	03/03/2015 16:33

Surrogates	REC (%)	Limits	Analytical Comments: d7	
2-Fluorotoluene	83	70-130		03/03/2015 16:33

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1@50	**1503027-007A**	**Soil**	**02/27/2015 09:16**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 19:35
MTBE	ND	0.050	1	03/03/2015 19:35
Benzene	ND	0.0050	1	03/03/2015 19:35
Toluene	ND	0.0050	1	03/03/2015 19:35
Ethylbenzene	ND	0.0050	1	03/03/2015 19:35
Xylenes	ND	0.0050	1	03/03/2015 19:35

Surrogates	REC (%)	Limits	
2-Fluorotoluene	87	70-130	03/03/2015 19:35

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2@44	**1503027-008A**	**Soil**	**02/28/2015 10:19**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 20:05
MTBE	ND	0.050	1	03/03/2015 20:05
Benzene	ND	0.0050	1	03/03/2015 20:05
Toluene	ND	0.0050	1	03/03/2015 20:05
Ethylbenzene	ND	0.0050	1	03/03/2015 20:05
Xylenes	ND	0.0050	1	03/03/2015 20:05

Surrogates	REC (%)	Limits	
2-Fluorotoluene	87	70-130	03/03/2015 20:05

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3@40	**1503027-009A**	**Soil**	**02/27/2015 11:00**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 20:35
MTBE	ND	0.050	1	03/03/2015 20:35
Benzene	ND	0.0050	1	03/03/2015 20:35
Toluene	ND	0.0050	1	03/03/2015 20:35
Ethylbenzene	ND	0.0050	1	03/03/2015 20:35
Xylenes	ND	0.0050	1	03/03/2015 20:35

Surrogates	REC (%)	Limits	
2-Fluorotoluene	86	70-130	03/03/2015 20:35

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4@44	**1503027-010A**	**Soil**	**02/28/2015 08:40**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 21:05
MTBE	ND	0.050	1	03/03/2015 21:05
Benzene	ND	0.0050	1	03/03/2015 21:05
Toluene	ND	0.0050	1	03/03/2015 21:05
Ethylbenzene	ND	0.0050	1	03/03/2015 21:05
Xylenes	ND	0.0050	1	03/03/2015 21:05

Surrogates	REC (%)	Limits	
2-Fluorotoluene	84	70-130	03/03/2015 21:05

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@2	**1503027-011A**	**Soil**	**02/27/2015 13:18**	**GC3**	**101930**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/06/2015 00:16
MTBE	ND	0.050	1	03/06/2015 00:16
Benzene	ND	0.0050	1	03/06/2015 00:16
Toluene	ND	0.0050	1	03/06/2015 00:16
Ethylbenzene	ND	0.0050	1	03/06/2015 00:16
Xylenes	ND	0.0050	1	03/06/2015 00:16

Surrogates	REC (%)	Limits	
2-Fluorotoluene	88	70-130	03/06/2015 00:16

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@5	**1503027-012A**	**Soil**	**02/27/2015 13:20**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**8.4**	1.0	1	03/03/2015 21:35
MTBE	ND	0.050	1	03/03/2015 21:35
Benzene	ND	0.0050	1	03/03/2015 21:35
Toluene	ND	0.0050	1	03/03/2015 21:35
Ethylbenzene	ND	0.0050	1	03/03/2015 21:35
Xylenes	**0.027**	0.0050	1	03/03/2015 21:35

Surrogates	REC (%)	Limits	Analytical Comments: d7,d9	
2-Fluorotoluene	90	70-130		03/03/2015 21:35

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@14	**1503027-013A**	**Soil**	**02/27/2015 13:42**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 23:05
MTBE	ND	0.050	1	03/03/2015 23:05
Benzene	ND	0.0050	1	03/03/2015 23:05
Toluene	ND	0.0050	1	03/03/2015 23:05
Ethylbenzene	ND	0.0050	1	03/03/2015 23:05
Xylenes	ND	0.0050	1	03/03/2015 23:05

Surrogates	REC (%)	Limits	
2-Fluorotoluene	89	70-130	03/03/2015 23:05

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@2	**1503027-014A**	**Soil**	**02/27/2015 12:45**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/03/2015 23:34
MTBE	ND	0.050	1	03/03/2015 23:34
Benzene	ND	0.0050	1	03/03/2015 23:34
Toluene	ND	0.0050	1	03/03/2015 23:34
Ethylbenzene	ND	0.0050	1	03/03/2015 23:34
Xylenes	ND	0.0050	1	03/03/2015 23:34

Surrogates	REC (%)	Limits	
2-Fluorotoluene	85	70-130	03/03/2015 23:34

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@7.5	**1503027-015A**	**Soil**	**02/27/2015 12:54**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**11**	1.0	1	03/04/2015 00:34
MTBE	ND	0.050	1	03/04/2015 00:34
Benzene	ND	0.0050	1	03/04/2015 00:34
Toluene	ND	0.0050	1	03/04/2015 00:34
Ethylbenzene	ND	0.0050	1	03/04/2015 00:34
Xylenes	ND	0.0050	1	03/04/2015 00:34

Surrogates	REC (%)	Limits	Analytical Comments: d7
2-Fluorotoluene	81	70-130	03/04/2015 00:34

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/5/15	**Unit:**	mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@12	**1503027-016A**	**Soil**	**02/27/2015 13:05**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**1800**	200	200	03/03/2015 16:03
MTBE	ND	10	200	03/03/2015 16:03
Benzene	ND	1.0	200	03/03/2015 16:03
Toluene	ND	1.0	200	03/03/2015 16:03
Ethylbenzene	**1.6**	1.0	200	03/03/2015 16:03
Xylenes	**3.4**	1.0	200	03/03/2015 16:03

Surrogates	REC (%)	Limits	Analytical Comments: d7,d9	
aaa-TFT_2	84	70-130		03/03/2015 16:03

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@30	**1503027-017A**	**Soil**	**02/27/2015 14:06**	**GC19**	**101795**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	03/04/2015 01:04
MTBE	ND	0.050	1	03/04/2015 01:04
Benzene	ND	0.0050	1	03/04/2015 01:04
Toluene	ND	0.0050	1	03/04/2015 01:04
Ethylbenzene	ND	0.0050	1	03/04/2015 01:04
Xylenes	ND	0.0050	1	03/04/2015 01:04

Surrogates	REC (%)	Limits	
2-Fluorotoluene	89	70-130	03/04/2015 01:04

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/3/15	**Unit:**	µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1W	**1503027-002A**	**Water**	**02/27/2015 09:55**	**GC3**	**101843**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	03/02/2015 20:32
MTBE	ND	5.0	1	03/02/2015 20:32
Benzene	ND	0.50	1	03/02/2015 20:32
Toluene	ND	0.50	1	03/02/2015 20:32
Ethylbenzene	ND	0.50	1	03/02/2015 20:32
Xylenes	ND	0.50	1	03/02/2015 20:32

Surrogates	REC (%)	Limits	
aaa-TFT_2	106	70-130	03/02/2015 20:32

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2W	**1503027-003A**	**Water**	**02/28/2015 10:51**	**GC3**	**101843**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	03/02/2015 21:01
MTBE	ND	5.0	1	03/02/2015 21:01
Benzene	ND	0.50	1	03/02/2015 21:01
Toluene	ND	0.50	1	03/02/2015 21:01
Ethylbenzene	ND	0.50	1	03/02/2015 21:01
Xylenes	ND	0.50	1	03/02/2015 21:01

Surrogates	REC (%)	Limits	
aaa-TFT_2	100	70-130	03/02/2015 21:01

Analyst(s): IA

(Cont.)

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW5030B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	3/2/15-3/3/15	**Unit:**	µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3W	**1503027-004A**	**Water**	**02/27/2015 11:30**	**GC3**	**101843**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	03/02/2015 23:28
MTBE	ND	5.0	1	03/02/2015 23:28
Benzene	ND	0.50	1	03/02/2015 23:28
Toluene	ND	0.50	1	03/02/2015 23:28
Ethylbenzene	ND	0.50	1	03/02/2015 23:28
Xylenes	ND	0.50	1	03/02/2015 23:28

Surrogates	REC (%)	Limits	
aaa-TFT_2	103	70-130	03/02/2015 23:28

Analyst(s): IA

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4W	**1503027-005A**	**Water**	**02/28/2015 11:43**	**GC3**	**101843**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	03/03/2015 18:00
MTBE	ND	5.0	1	03/03/2015 18:00
Benzene	**0.53**	0.50	1	03/03/2015 18:00
Toluene	**0.63**	0.50	1	03/03/2015 18:00
Ethylbenzene	ND	0.50	1	03/03/2015 18:00
Xylenes	ND	0.50	1	03/03/2015 18:00

Surrogates	REC (%)	Limits	
aaa-TFT_2	99	70-130	03/03/2015 18:00

Analyst(s): IA

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3050B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW6020
Date Prepared:	3/2/15	**Unit:**	mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
Drum	**1503027-001A**	**Soil/TOTAL**	**02/28/2015 10:45**	**ICP-MS1**	**101794**

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	03/04/2015 18:10
Chromium	**46**	0.50	1	03/04/2015 18:10
Lead	**8.0**	0.50	1	03/04/2015 18:10
Nickel	**51**	0.50	1	03/04/2015 18:10
Zinc	**71**	5.0	1	03/04/2015 18:10

Surrogates	REC (%)	Limits	
Tb 350.917	109	70-130	03/04/2015 18:10

Analyst(s): DVH

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1@17	**1503027-006A**	**Soil**	**02/27/2015 08:28**	**GC11A**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**4200**	50	50	03/03/2015 14:42
TPH-Motor Oil (C18-C36)	**1900**	250	50	03/03/2015 14:42

Surrogates	REC (%)	Limits	Analytical Comments: e1	
C9	105	70-130		03/03/2015 14:42

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1@50	**1503027-007A**	**Soil**	**02/27/2015 09:16**	**GC11B**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/03/2015 03:16
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 03:16

Surrogates	REC (%)	Limits	
C9	102	70-130	03/03/2015 03:16

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2@44	**1503027-008A**	**Soil**	**02/28/2015 10:19**	**GC6B**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/03/2015 03:48
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 03:48

Surrogates	REC (%)	Limits	
C9	94	70-130	03/03/2015 03:48

Analyst(s): TK

(Cont.)

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3@40	**1503027-009A**	**Soil**	**02/27/2015 11:00**	**GC6A**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/03/2015 03:48
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 03:48

Surrogates	REC (%)	Limits	
C9	71	70-130	03/03/2015 03:48

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4@44	**1503027-010A**	**Soil**	**02/28/2015 08:40**	**GC11A**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/03/2015 10:08
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 10:08

Surrogates	REC (%)	Limits	
C9	103	70-130	03/03/2015 10:08

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@2	**1503027-011A**	**Soil**	**02/27/2015 13:18**	**GC9b**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**170**	50	50	03/03/2015 13:28
TPH-Motor Oil (C18-C36)	**2700**	250	50	03/03/2015 13:28

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	86	70-130		03/03/2015 13:28

Analyst(s): TK

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@5	**1503027-012A**	**Soil**	**02/27/2015 13:20**	**GC9b**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**16**	1.0	1	03/03/2015 11:03
TPH-Motor Oil (C18-C36)	**13**	5.0	1	03/03/2015 11:03

Surrogates	REC (%)	Limits	Analytical Comments: e1,e7	
C9	89	70-130		03/03/2015 11:03

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-5@14	**1503027-013A**	**Soil**	**02/27/2015 13:42**	**GC6B**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**2.4**	1.0	1	03/03/2015 04:59
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 04:59

Surrogates	REC (%)	Limits	Analytical Comments: e3	
C9	94	70-130		03/03/2015 04:59

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@2	**1503027-014A**	**Soil**	**02/27/2015 12:45**	**GC6A**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**16**	5.0	5	03/03/2015 15:36
TPH-Motor Oil (C18-C36)	**260**	25	5	03/03/2015 15:36

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	91	70-130		03/03/2015 15:36

Analyst(s): TK

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3550B
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@7.5	**1503027-015A**	**Soil**	**02/27/2015 12:54**	**GC9a**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**44**	1.0	1	03/03/2015 11:03
TPH-Motor Oil (C18-C36)	**34**	5.0	1	03/03/2015 11:03

Surrogates	REC (%)	Limits	Analytical Comments: e7,e8,e2
C9	99	70-130	03/03/2015 11:03

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@12	**1503027-016A**	**Soil**	**02/27/2015 13:05**	**GC6A**	**101775**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**6700**	50	50	03/03/2015 11:52
TPH-Motor Oil (C18-C36)	**3400**	250	50	03/03/2015 11:52

Surrogates	REC (%)	Limits	Analytical Comments: e1
C9	115	70-130	03/03/2015 11:52

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-6@30	**1503027-017A**	**Soil**	**02/27/2015 14:06**	**GC11B**	**101827**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/03/2015 06:42
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/03/2015 06:42

Surrogates	REC (%)	Limits	
C9	102	70-130	03/03/2015 06:42

Analyst(s): TK

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3510C
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-1W	**1503027-002B**	**Water**	**02/27/2015 09:55**	**GC2A**	**101808**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**320**	50	1	03/03/2015 11:40
TPH-Motor Oil (C18-C36)	**1100**	250	1	03/03/2015 11:40

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	107	70-130		03/03/2015 11:40

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-2W	**1503027-003B**	**Water**	**02/28/2015 10:51**	**GC2B**	**101808**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/03/2015 11:40
TPH-Motor Oil (C18-C36)	ND	250	1	03/03/2015 11:40

Surrogates	REC (%)	Limits		
C9	104	70-130		03/03/2015 11:40

Analyst(s): TK

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-3W	**1503027-004B**	**Water**	**02/27/2015 11:30**	**GC6B**	**101808**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**190**	50	1	03/03/2015 11:52
TPH-Motor Oil (C18-C36)	**390**	250	1	03/03/2015 11:52

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	97	70-130		03/03/2015 11:52

Analyst(s): TK

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Analytical Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Project:	#B11167.04; HACA UST Services	**Extraction Method:**	SW3510C
Date Received:	3/2/15 16:42	**Analytical Method:**	SW8015B
Date Prepared:	3/2/15	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
B-4W	**1503027-005B**	**Water**	**02/28/2015 11:43**	**GC11B**	**101808**

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**130**	50	1	03/03/2015 14:42
TPH-Motor Oil (C18-C36)	**690**	250	1	03/03/2015 14:42

Surrogates	REC (%)	Limits	Analytical Comments: e7,e2	
C9	102	70-130		03/03/2015 14:42

Analyst(s): TK

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101775
Date Analyzed:	3/2/15	**Extraction Method:**	SW3550B
Instrument:	GC6A	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101775 1503004-001AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	41.4	1.0	40	-	104	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	19.7	22.3		25	79	89	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR		56	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101808
Date Analyzed:	3/2/15	**Extraction Method:**	SW3510C
Instrument:	GC6B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101808

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	1150	50	1000	-	115	61-157
TPH-Motor Oil (C18-C36)	ND	-	250	-	-	-	-
Surrogate Recovery							
C9	602	585		625	96	94	70-134

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101827
Date Analyzed:	3/3/15	**Extraction Method:**	SW3550B
Instrument:	GC11B	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101827 1503027-017AMS/MSD

QC Summary Report for SW8015B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	37.9	1.0	40	-	95	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	25.4	24.8		25	101	99	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	46.0	46.7	40	ND	115	117	70-130	1.59	30
Surrogate Recovery									
C9	24.7	25.1	25		99	100	70-130	1.80	30

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/3/15	**BatchID:**	101839
Date Analyzed:	3/2/15	**Extraction Method:**	SW5030B
Instrument:	GC38	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101839 1502968-052AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	8.68	0.50	10	-	87	54-140
Benzene	ND	9.30	0.50	10	-	93	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	31.5	2.0	40	-	79	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	11.2	0.50	10	-	112	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	12.5	0.50	10	-	125	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	8.81	0.50	10	-	88	66-125
1,1-Dichloroethene	ND	11.9	0.50	10	-	119	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/3/15	**BatchID:**	101839
Date Analyzed:	3/2/15	**Extraction Method:**	SW5030B
Instrument:	GC38	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101839 1502968-052AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	8.23	0.50	10	-	82	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	8.14	0.50	10	-	81	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	9.34	0.50	10	-	93	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	10.4	0.50	10	-	103	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	11.4	0.50	10	-	114	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	27.5	32.7		25	110	131	65-135
Toluene-d8	27.1	27.2		25	108	109	64-112
4-BFB	2.35	2.46		2.5	94	98	59-139

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/3/15	**BatchID:**	101839
Date Analyzed:	3/2/15	**Extraction Method:**	SW5030B
Instrument:	GC38	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101839 1502968-052AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.32	9.55	10	ND	93	96	69-139	2.48	20
Benzene	10.0	10.1	10	ND	100	101	69-141	0.585	20
t-Butyl alcohol (TBA)	30.8	32.6	40	ND	77	82	41-152	5.61	20
Chlorobenzene	11.6	11.6	10	ND	116	117	77-120	0.274	20
1,2-Dibromoethane (EDB)	12.6	13.1	10	ND	126	131	76-135	4.08	20
1,2-Dichloroethane (1,2-DCA)	8.80	9.26	10	ND	88	93	73-139	5.06	20
1,1-Dichloroethene	8.61	9.58	10	ND	86	96	59-140	10.7	20
Diisopropyl ether (DIPE)	9.04	9.03	10	ND	90	90	72-140	0	20
Ethyl tert-butyl ether (ETBE)	8.82	8.92	10	ND	88	89	71-140	1.10	20
Methyl-t-butyl ether (MTBE)	9.38	9.96	10	ND	94	100	73-139	5.99	20
Toluene	10.5	10.6	10	ND	103	104	71-128	0.980	20
Trichloroethene	10.2	10.7	10	0.7870	94	99	64-132	5.31	20
Surrogate Recovery									
Dibromofluoromethane	28.3	29.2	25		113	117	80-124	3.19	20
Toluene-d8	26.0	26.2	25		104	105	75-110	0.494	20
4-BFB	2.38	2.40	2.5		95	96	69-114	0.981	20

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101811
Date Analyzed:	3/2/15	**Extraction Method:**	SW3550B
Instrument:	GC35	**Analytical Method:**	SW8270C-SIM
Matrix:	Soil	**Unit:**	mg/kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101811 1503027-011AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.165	0.010	0.20	-	83	30-130
Chrysene	ND	0.140	0.010	0.20	-	70	30-130
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.189	0.010	0.20	-	95	30-130
2-Methylnaphthalene	ND	0.179	0.010	0.20	-	90	30-130
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.160	0.010	0.20	-	80	30-130
Pyrene	ND	0.141	0.010	0.20	-	71	30-130
Surrogate Recovery							
1-Fluoronapthalene	0.488	0.498		0.50	98	100	30-130
2-Fluorobiphenyl	0.489	0.492		0.50	98	98	30-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.5	NR	NR	-	NR	
Chrysene	NR	NR		ND<0.5	NR	NR	-	NR	
1-Methylnaphthalene	NR	NR		ND<0.5	NR	NR	-	NR	
2-Methylnaphthalene	NR	NR		ND<0.5	NR	NR	-	NR	
Phenanthrene	NR	NR		ND<0.5	NR	NR	-	NR	
Pyrene	NR	NR		ND<0.5	NR	NR	-	NR	
Surrogate Recovery									
1-Fluoronapthalene	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101795
Date Analyzed:	3/2/15	**Extraction Method:**	SW5030B
Instrument:	GC19	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101795 1503004-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.549	0.40	0.60	-	92	70-130
MTBE	ND	0.101	0.050	0.10	-	101	70-130
Benzene	ND	0.117	0.0050	0.10	-	117	70-130
Toluene	ND	0.122	0.0050	0.10	-	121	70-130
Ethylbenzene	ND	0.120	0.0050	0.10	-	120	70-130
Xylenes	ND	0.383	0.0050	0.30	-	128	70-130
Surrogate Recovery							
2-Fluorotoluene	0.0995	0.114		0.10	99	114	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.692	0.710	0.60	ND	115	118	70-130	2.61	20
MTBE	0.0778	0.0728	0.10	ND	78	73	70-130	6.77	20
Benzene	0.108	0.112	0.10	ND	108	112	70-130	3.42	20
Toluene	0.110	0.115	0.10	ND	108	113	70-130	4.25	20
Ethylbenzene	0.118	0.119	0.10	ND	118	119	70-130	1.08	20
Xylenes	0.370	0.363	0.30	ND	123	121	70-130	1.92	20
Surrogate Recovery									
2-Fluorotoluene	0.102	0.107	0.10		102	107	70-130	4.62	20

(Cont.)

CDPH ELAP 1644 ♦ NELAP 4033ORELAP

QA/QC Officer

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/4/15	**BatchID:**	101930
Date Analyzed:	3/5/15	**Extraction Method:**	SW5030B
Instrument:	GC7	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101930 1503106-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.639	0.40	0.60	-	107	70-130
MTBE	ND	0.0726	0.050	0.10	-	73	70-130
Benzene	ND	0.106	0.0050	0.10	-	106	70-130
Toluene	ND	0.107	0.0050	0.10	-	107	70-130
Ethylbenzene	ND	0.115	0.0050	0.10	-	115	70-130
Xylenes	ND	0.356	0.0050	0.30	-	119	70-130
Surrogate Recovery							
2-Fluorotoluene	0.0989	0.0945		0.10	99	94	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		ND<0.8	NR	NR	-	NR	
MTBE	NR	NR		ND<0.1	NR	NR	-	NR	
Benzene	NR	NR		ND<0.01	NR	NR	-	NR	
Toluene	NR	NR		ND<0.01	NR	NR	-	NR	
Ethylbenzene	NR	NR		ND<0.01	NR	NR	-	NR	
Xylenes	NR	NR		0.15	NR	NR	-	NR	
Surrogate Recovery									
2-Fluorotoluene	NR	NR			NR	NR	-	NR	

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101843
Date Analyzed:	3/2/15	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101843 1502968-050BMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	70.1	40	60	-	117	70-130
MTBE	ND	11.0	5.0	10	-	110	70-130
Benzene	ND	10.4	0.50	10	-	104	70-130
Toluene	ND	10.6	0.50	10	-	106	70-130
Ethylbenzene	ND	10.6	0.50	10	-	106	70-130
Xylenes	ND	32.4	0.50	30	-	107	70-130
Surrogate Recovery							
aaa-TFT_2	9.90	9.89		10	99	99	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	64.8	69.8	60	ND	108	116	70-130	7.52	20
MTBE	10.5	10.6	10	ND	105	106	70-130	0.482	20
Benzene	9.87	10.3	10	ND	99	103	70-130	4.41	20
Toluene	10.0	10.4	10	ND	96	100	70-130	4.20	20
Ethylbenzene	10.3	10.7	10	ND	102	106	70-130	3.47	20
Xylenes	31.4	32.3	30	ND	103	107	70-130	2.92	20
Surrogate Recovery									
aaa-TFT_2	9.39	9.54	10		94	95	70-130	1.58	20

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Quality Control Report

Client:	SCA Environmental, Inc.	**WorkOrder:**	1503027
Date Prepared:	3/2/15	**BatchID:**	101794
Date Analyzed:	3/3/15	**Extraction Method:**	SW3050B
Instrument:	ICP-MS2	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	#B11167.04; HACA UST Services	**Sample ID:**	MB/LCS-101794 1503004-001AMS/MSD

QC Summary Report for LUFT 5 Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	47.6	0.25	50	-	95	75-125
Chromium	ND	54.8	0.50	50	-	110	75-125
Lead	ND	48.4	0.50	50	-	97	75-125
Nickel	ND	53.7	0.50	50	-	107	75-125
Zinc	ND	543	5.0	500	-	109	75-125
Surrogate Recovery							
Tb 350.917	531	491		500	106	98	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	50.3	52.5	50	ND	100	105	75-125	4.22	20
Chromium	72.0	64.9	50	20.62	103	89	75-125	10.3	20
Lead	NR	NR	50	131.9	NR	NR	75-125	NR	20
Nickel	69.2	69.0	50	17.22	104	104	75-125	0	20
Zinc	603	559	500	89.81	103	94	75-125	7.71	20
Surrogate Recovery									
Tb 350.917	531	557	500		106	111	70-130	4.71	20

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1503027 **ClientCode: SCAF**

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Report to:
Karen Emery
SCA Environmental, Inc.
650 Delancey Street, #222
San Francisco, CA 94107
(510) 459-8233 FAX: (415) 703-0701

Email: kemery@sca-enviro.com
cc/3rd Party:
PO:
ProjectNo: #B11167.04; HACA UST Services

Bill to:
Accounts Payable
SCA Environmental, Inc.
650 Delancey Street, #222
San Francisco, CA 94107
emuise@sca-ic.com

Requested TAT: 5 days

Date Received: **03/02/2015**
Date Printed: **03/03/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1503027-001	Drum	Soil	2/28/2015 10:45	☐					A							
1503027-002	B-1W	Water	2/27/2015 9:55	☐	C			A			B					
1503027-003	B-2W	Water	2/28/2015 10:51	☐	C			A			B					
1503027-004	B-3W	Water	2/27/2015 11:30	☐	C			A			B					
1503027-005	B-4W	Water	2/28/2015 11:43	☐	C			A			B					
1503027-006	B-1@17	Soil	2/27/2015 8:28	☐			A			A						
1503027-007	B-1@50	Soil	2/27/2015 9:16	☐			A			A						
1503027-008	B-2@44	Soil	2/28/2015 10:19	☐			A			A						
1503027-009	B-3@40	Soil	2/27/2015 11:00	☐			A			A						
1503027-010	B-4@44	Soil	2/28/2015 8:40	☐			A			A						
1503027-011	B-5@2	Soil	2/27/2015 13:18	☐		A	A			A						
1503027-012	B-5@5	Soil	2/27/2015 13:20	☐		A	A			A						
1503027-013	B-5@14	Soil	2/27/2015 13:42	☐			A			A						
1503027-014	B-6@2	Soil	2/27/2015 12:45	☐		A	A			A						
1503027-015	B-6@7.5	Soil	2/27/2015 12:54	☐		A	A			A						

Test Legend:

1	8260VOC_W	2	8270_PNA_S	3	G-MBTEX_S	4	G-MBTEX_W	5	LUFTMS_S
6	TPH(DMO)_S	7	TPH(DMO)_W	8		9		10	
11		12							

Prepared by: Shana Carter

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1503027 **ClientCode: SCAF**

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Report to:
Karen Emery
SCA Environmental, Inc.
650 Delancey Street, #222
San Francisco, CA 94107
(510) 459-8233 FAX: (415) 703-0701

Email: kemery@sca-enviro.com
cc/3rd Party:
PO:
ProjectNo: #B11167.04; HACA UST Services

Bill to:
Accounts Payable
SCA Environmental, Inc.
650 Delancey Street, #222
San Francisco, CA 94107
emuise@sca-ic.com

Requested TAT: 5 days

Date Received: **03/02/2015**
Date Printed: **03/03/2015**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1503027-016	B-6@12	Soil	2/27/2015 13:05	☐			A			A						
1503027-017	B-6@30	Soil	2/27/2015 14:06	☐			A			A						

Test Legend:

1	8260VOC_W	2	8270_PNA_S	3	G-MBTEX_S	4	G-MBTEX_W	5	LUFTMS_S
6	TPH(DMO)_S	7	TPH(DMO)_W	8		9		10	
11		12							

Prepared by: Shana Carter

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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WORK ORDER SUMMARY

Client Name: SCA ENVIRONMENTAL, INC. **QC Level:** LEVEL 2 **Work Order:** 1503027
Project: #B11167.04; HACA UST Services **Client Contact:** Karen Emery **Date Received:** 3/2/2015
Comments: **Contact's Email:** kemery@sca-enviro.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1503027-001A	Drum	Soil	SW6020 (LUFT)	2	8OZ GJ	☐	2/28/2015 10:45	5 days		☐	
1503027-002A	B-1W	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	2/27/2015 9:55	5 days	Present	☐	
1503027-002B	B-1W	Water	SW8015B (Diesel & Motor Oil)	2	aVOA	☐	2/27/2015 9:55	5 days	Present	☐	
1503027-002C	B-1W	Water	SW8260B (VOCs) <Naphthalene>	2	aVOA	☐	2/27/2015 9:55	5 days	Present	☐	
1503027-003A	B-2W	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	2/28/2015 10:51	5 days	Present	☐	
1503027-003B	B-2W	Water	SW8015B (Diesel & Motor Oil)	2	aVOA	☐	2/28/2015 10:51	5 days	Present	☐	
1503027-003C	B-2W	Water	SW8260B (VOCs) <Naphthalene>	2	aVOA	☐	2/28/2015 10:51	5 days	Present	☐	
1503027-004A	B-3W	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	2/27/2015 11:30	5 days	Present	☐	
1503027-004B	B-3W	Water	SW8015B (Diesel & Motor Oil)	2	aVOA	☐	2/27/2015 11:30	5 days	Present	☐	
1503027-004C	B-3W	Water	SW8260B (VOCs) <Naphthalene>	2	aVOA	☐	2/27/2015 11:30	5 days	Present	☐	
1503027-005A	B-4W	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	2/28/2015 11:43	5 days	Present	☐	
1503027-005B	B-4W	Water	SW8015B (Diesel & Motor Oil)	2	aVOA	☐	2/28/2015 11:43	5 days	Present	☐	
1503027-005C	B-4W	Water	SW8260B (VOCs) <Naphthalene>	2	aVOA	☐	2/28/2015 11:43	5 days	Present	☐	
1503027-006A	B-1@17	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ	☐	2/27/2015 8:28	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-007A	B-1@50	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ	☐	2/27/2015 9:16	5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

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WORK ORDER SUMMARY

Client Name: SCA ENVIRONMENTAL, INC. **QC Level:** LEVEL 2 **Work Order:** 1503027
Project: #B11167.04; HACA UST Services **Client Contact:** Karen Emery **Date Received:** 3/2/2015
Comments: **Contact's Email:** kemery@sca-enviro.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1503027-007A	B-1@50	Soil	SW8021B/8015Bm (G/MBTEX)	1	8OZ GJ	☐	2/27/2015 9:16	5 days		☐	
1503027-008A	B-2@44	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/28/2015 10:19	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-009A	B-3@40	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/27/2015 11:00	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-010A	B-4@44	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/28/2015 8:40	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-011A	B-5@2	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ	☐	2/27/2015 13:18	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
1503027-012A	B-5@5	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ	☐	2/27/2015 13:20	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
1503027-013A	B-5@14	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/27/2015 13:42	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-014A	B-6@2	Soil	SW8015B (Diesel & Motor Oil)	1	8OZ GJ	☐	2/27/2015 12:45	5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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WORK ORDER SUMMARY

Client Name: SCA ENVIRONMENTAL, INC. **QC Level:** LEVEL 2 **Work Order:** 1503027
Project: #B11167.04; HACA UST Services **Client Contact:** Karen Emery **Date Received:** 3/2/2015
Comments: **Contact's Email:** kemery@sca-enviro.com

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1503027-014A	B-6@2	Soil	SW8021B/8015Bm (G/MBTEX)	1	8OZ GJ	☐	2/27/2015 12:45	5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
1503027-015A	B-6@7.5	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/27/2015 12:54	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
			SW8270C (PAHs/PNAs)			☐		5 days		☐	
1503027-016A	B-6@12	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/27/2015 13:05	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	
1503027-017A	B-6@30	Soil	SW8015B (Diesel & Motor Oil)	1	Acetate Liner	☐	2/27/2015 14:06	5 days		☐	
			SW8021B/8015Bm (G/MBTEX)			☐		5 days		☐	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

1503027

SCA
ENVIRONMENTAL, INC.

CHAIN OF CUSTODY

PROJECT NAME: HACA UST Services

PROJECT NO.: B11167.04 LAB: McCampbell

PROJECT CONTACT: Karen Emery TURNAROUND: 5 day

SEND REPORTS/INVOICES TO: Karen Emery Email: kemery@sca-enviro.com

SAMPLED BY: TK/CH/KE

LABORATORY I.D. NUMBER	SCA SAMPLE I.D.	MATRIX				CONTAINERS					PRESERVATIVE						SAMPLE COLLECTION INFORMATION		NOTES	ANALYSIS REQUESTED											
		WATER	SOIL	AIR	SLUDGE	VOA	LITER	POLY	TUBE	GLASS JAR	ICE	HCL	H_2SO_4	HNO_3	OTHER	NONE	DATE (MM/DD/YY)	TIME		TPHg/BTEX/MTBE	TPHd & TPHmo	PAHs including Naphthalene (8270)	Naphthalene only (8260)	LUFT 5 Metals	2:1 Composite						
	DRUM		X							X	X						2/28/2015	10:45						X	X						
	B-1W	X				X					X	X					2/27/2015	09:55		X	X		X							
	B-2W	X				X					X	X					2/28/2015	10:51		X	X		X							
	B-3W	X				X					X	X					2/27/2015	11:30		X	X		X							
	B-4W	X				X					X	X					2/28/2015	11:43		X	X		X							
	B-1@17		X							X	X						2/27/2015	08:28		X	X									
	B-1@50		X							X	X						2/27/2015	09:16		X	X									
	B-2@44		X						X		X						2/28/2015	10:19		X	X									
	B-3@40		X						X		X						2/27/2015	11:00		X	X									
	B-4@44		X						X		X						2/28/2015	08:40		X	X									
	B-5@2		X							X	X						2/27/2015	13:18		X	X	X								
	B-5@5		X							X	X						2/27/2015	13:20		X	X	X								
	B-5@14		X						X		X						2/27/2015	13:42		X	X									

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
	3/2/15 1327		3-2-15 1328
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
	3-2-15 1510	Shana Carter	3/2/15 1510
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

COMMENTS & NOTES:

ICE / t° 3.2
GOOD CONDITION ___ APPROPRIATE
HEAD SPACE ABSENT ___ CONTAINERS ___
DECHLORINATED IN LAB ___ PRESERVED IN LAB ___
PRESERVATION VOAS O&G METALS OTHER

SCA
ENVIRONMENTAL, INC.

1503027

CHAIN OF CUSTODY

PROJECT NAME: HACA UST Services

PROJECT NO.: B11167.04 LAB: McCampbell

PROJECT CONTACT: Karen Emery TURNAROUND: 5 day

SEND REPORTS/INVOICES TO: Karen Emery Email: kemery@sca-enviro.com

SAMPLED BY: TK/CH/KE

LABORATORY I.D. NUMBER	SCA SAMPLE I.D.	MATRIX				CONTAINERS					PRESERVATIVE						SAMPLE COLLECTION INFORMATION		NOTES	ANALYSIS REQUESTED												
		WATER	SOIL	AIR	SLUDGE	VOA	LITER	POLY	TUBE	GLASS JAR	ICE	HCL	H_2SO_4	HNO_3	OTHER	NONE	DATE (MM/DD/YY)	TIME		TPHg/BTEX/MTBE	TPHd & TPHmo	PAHs including Naphthalene (8270)	Naphthalene only (8260)	LUFT 5 Metals	2:1 Composite						
	B-6@2		X							X	X						2/27/2015	12:45		X	X	X									
	B-6@7.5		X						X		X						2/27/2015	12:54		X	X	X									
	B-6@12		X						X		X						2/27/2015	13:05		X	X										
	B-6@30		X						X		X						2/27/2015	14:06		X	X										

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
Karen Emery	3/2/15 1327		3-2-15 1327
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
	3-2-15 1510	Shana Carter	3/2/15 1510
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME

COMMENTS & NOTES:

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **SCA Environmental, Inc.** Date and Time Received: **3/2/2015 4:42:07 PM**

Project Name: **#B11167.04; HACA UST Services** LogIn Reviewed by: Shana Carter

WorkOrder №: **1503027** Matrix: Soil/Water Carrier: Bernie Cummins (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 3.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments: