**PACIFIC CONTRACTORING & CONSTRUCTION, INC.**
**Consulting Engineers & Contractors**

*35 Stillman Street, Suite 126*
*San Francisco, CA 94107*
*Phone/fax (415) 974-1853*
*Cell (415) 516-8545*
*Contractor State License Board # 858547 (A, B, Haz, Asb)*
*California Professional Engineering License # 38905*
*Nevada Professional Engineering License # 17624*
*Nevada Certified Environmental Manager #1870*



January. 24, 2013

Ms. Karel Detterman, PG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: Soil and Groundwater Investigation; Fuel Leak Case No. RO0003065 and Geo Tracker Global ID T0600102132; Smith Commercial Property; 2520 Blanding Avenue, Alameda, CA 94501

Dear Ms. Detterman:

Please accept for your review the completed Soil and Groundwater Investigation for the property referenced above.

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.

Please do not hesitate to contact me at 974-1853 if you have any questions.

Sincerely,

**Pacific Engineering & Construction, Inc.**

A. Mark Waldman, P.E.
Principal Engineer

Owner / Responsible Person: P.J. Smith

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December 28, 2012

Ms. Karel Detterman, PG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

RE: Soil and Groundwater Investigation; Fuel Leak Case No. RO0003065 and Geo Tracker Global ID T0600102132; Smith Commercial Property; 2520 Blanding Avenue, Alameda, CA 94501

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Please do not hesitate to contact me at 974-1853 if you have any questions.

Sincerely,

**Pacific Engineering & Construction, Inc.**

A. Mark Waldman, P.E.
Principal Engineer

# *Soil and Groundwater Investigation*

# 2520 Blanding Avenue
# Alameda, California

# November 30, 2012

***Prepared for:***
P.J. Smith Family Trust

***Prepared by:***
Pacific Engineering and Construction, Inc.
35 Tillman Street, Ste. 126
San Francisco, California 94107

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**APPENDICES**

## 1.0 INTRODUCTION

Pacific Engineering and Construction, Inc. (PECI) appreciates the opportunity to work on the 2520 Blanding Avenue project in Alameda, California (Site). PECI has been retained by the P.J. Smith Family Trust to perform a Soil and Groundwater Investigation at the subject site.

A 550-gallon gasoline underground storage tank (UST) was removed from the site between 1982 and 1984. Two previous subsurface sampling investigations have been performed at this site. The first was conducted by Olson Environmental, Inc. (OEI) in November 2009 and the second by PECI in September 2011. Following review of the information provided in these reports, on May 2, 2012, the Alameda County Health Care Services Agency (ACHSA) issued a Directive Letter requesting a Soil and Groundwater Investigation Workplan be prepared for the site. Therefore, on July 24, 2012, PECI prepared a Soil and Groundwater Investigation Workplan, which outlined the proposed tasks to provide further analytical data in order to develop a plan of action for site closure. In general, the Workplan proposed advancing a series of four (4) additional temporary borings in the area of the former UST and collecting soil and grab groundwater samples from each boring. The Workplan was approved, with comments, by the ACHSA in their September 27, 2012 Directive Letter (Appendix A). As such, PECI implemented the Workplan on November 16, 2012 and, herein, presents the results of the investigation.

## 2.0 SITE INFORMATION

The subject site is located in the northeastern part of the City of Alameda. A tidal canal connecting to the San Francisco Bay Estuary lies approximately 390 feet to the north-northeast of the site. The elevation of the site is approximately 9 to 10 feet, according to the Oakland-East California 7.5-Minute Quadrangle Map. The site is rectangular in shape and measures approximately 148 feet by 48 feet. The long access of the site trends N 33 West, or 33 degrees to the west of north. The site is accessed from Blanding Avenue, which lies along the northeast property boundary (Site Location Map – Figure 1).

### 2.1 Site Background and Previous Investigations

A Phase I Environmental Site Assessment (ESA) for the site was performed by OEI on October 21, 2009. The Phase I ESA indicated that, according to the City of Alameda Fire Department, a 550-gallon gasoline UST was installed on the property in approximately 1931. Records were not available regarding the removal of the UST. However, according to the property owner, the UST was formerly located along the southeastern property boundary and was removed sometime between 1982 and 1984. Based on this information, and observations made during a site inspection, OEI recommended soil borings be advanced and to collect soil and groundwater samples to determine whether potential leaks from the former UST have affected subsurface environmental conditions (OEI, 2009).

Following the recommendations contained in the Phase I ESA, in November 2009, OEI conducted a Limited Soil and Groundwater Investigation at the site. The purpose of the investigation was to determine if historical onsite usage of hazardous materials, including the former UST, had impacted the subsurface of the subject property. The results of the investigation concluded that there were low concentrations (i.e. concentrations below the applicable Environmental Screening Levels (ESLs)) of hydrocarbon contamination in soil samples that were collected at a depth of seven (7) feet in the area where the former UST was located. No contamination was identified in soil samples collected 10 and 13 feet to the north-northeast (the assumed downgradient direction) of the former UST location (OEI, 2009). Grab groundwater samples collected during this investigation exhibited concentrations of gasoline, diesel, and motor oil above Regional Water Quality Control Board (RWQCB) established ESL

guidelines. Additionally, low concentrations (below ESLs) of volatile hydrocarbon constituents were detected in the groundwater samples.

To further assess the extent of contamination identified by OEI, a Supplemental Groundwater Investigation was conducted at the site by PECI in September 2011. As part of this investigation, PECI collected soil and grab groundwater samples from three (3) separate borings, located in close proximity to the borings advanced by OEI in 2009. Analytical results of the samples collected by PECI indicated that detected concentrations of chemicals of concern (COCs) were below the corresponding ESLs for all soil and groundwater samples collected during the investigation (PECI, 2011). Historical soil and groundwater sampling results are summarized in Tables 1 and 2, respectively

Although the 2011 investigation found no further COCs above ESLs at the site, the ACHSA did not believe the lateral and vertical extent of the contamination identified in the 2009 investigation by OEI was fully defined. Therefore, to fully define the extent of contamination (if any) from this release, PECI was retained to conduct this *Soil and Groundwater Investigation*. This current investigation consisted of the collection of soil and groundwater samples from four (4) additional boring locations, in the four compass directions, around the former UST location. The details and results of the investigation are provided in the following sections.

## 3.0 SOIL AND GROUNDWATER SAMPLING

Field activities involving soil borings and soil and grab groundwater sampling were performed on November 16, 2012. A total of four (4) temporary borings (SB-4 through SB-7) were advanced and soil and grab groundwater samples were collected from each of the borings. All project activities were completed under the direction of a State of California Professional Geologist.

### 3.1 Regulatory Liaison, Project Management, and Permitting

Prior to beginning field activities, and as required by law, the boring locations were marked and Underground Service Alert (USA) was notified to clear the proposed boring locations of underground utilities. A private underground locating service was also retained to clear each of the boring locations of potential underground utility lines. Additionally, a drilling permit from the Alameda County Public Works Agency (ACPWA) was obtained and the regulator from the ACHSA was notified prior to beginning drilling operations. A copy of the drilling permit is included in Appendix B. Lastly, a daily tailgate safety meeting was conducted for all personnel and visitors to the site at the beginning of each work day.

### 3.2 Soil Boring and Sampling

Soil borings were advanced by Environmental Control Associates (ECA), a C-57 licensed driller (# 695970), under the direction of a licensed State of California Professional Geologist. A Geoprobe™ direct-push sampling rig, equipped with macro-core sampling equipment capable of continuous core soil sampling, was used to advance the temporary borings. The Geoprobe™ direct-pushed (hammered) a 2-inch diameter steel core barrel to the desired depth at each of the boring locations. The core barrels were lined with clear plastic disposable tubing to facilitate continuous soil coring and soil logging for description. Soils were logged using the United Soil Classification System (USCS). Soil samples for laboratory analysis were collected at four (4), six (6), and eight (8) feet below ground surface (bgs).

Soil samples for laboratory analysis were collected by cutting the desired section of disposable plastic tubing, sealing the ends of the tube with Teflon™ tape, and capped. The caps were then sealed with silicone tape, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to

remain at 4$^{o}$ Celsius ($^{o}$C) until they arrived at the lab. A discussion of the soil sampling analytical results is presented in Section 4.2.

#### 3.2.1 Encountered Subsurface Materials

Site specific soils encountered during this investigation were identified as predominately Silty Sands (SM) of varying relative densities from the ground surface to approximately 10 feet bgs. An estimated stiff Silty Clay (CL) of medium plasticity was encountered in each of the borings below the Silty Sand to the total depths explored (between 10 and 12 feet bgs).

Groundwater was first encountered in each of the four borings advanced during this current investigation between 4 and 10 feet bgs. Static water stabilized between 5 and 10 feet bgs in each of the borings. Detailed boring logs depicting the encountered subsurface materials are presented in Appendix C.

### 3.3 Grab Groundwater Sampling

A grab groundwater sample was collected from each of the four borings. Each groundwater sample was obtained using a peristaltic pump and new disposable tubing. Groundwater samples were immediately transferred to EPA Testing Method approved containers, labeled, sealed in individual plastic bags, and placed in a pre-chilled ice chest with ice to remain at 4$^{o}$C until they arrived at the lab. A discussion of the grab groundwater sampling analytical results is presented in Sections 4.4 and 4.5.

### 3.4 Decontamination Procedures

All drilling and sampling equipment was decontaminated in a three-stage wash with 1) a non-phosphate detergent and brushing, 2) a tap water rinse, and 3) a purified water rinse. Purified water consisted of distilled water. All downhole equipment was either decontaminated prior to use or consisted of new materials.

### 3.5 Backfilling of Borings

Once all soil and grab groundwater samples were collected from the borings, each boring was backfilled using the tremmie method from the bottom of the boring to ground surface with neat cement grout. The neat cement grout was composed of a mix consistency of one 94 pound bag of Portland cement to five gallons of water. An ACPWA inspector witnessed the grouting procedures.

## 4.0 SAMPLE ANALYSIS AND RESULTS

During the drilling activities, soil and grab groundwater samples for laboratory analysis were collected in the methods described in Sections 3.2 and 3.3, respectively.

### 4.1 Soil Laboratory Analytical Methods

Once all soil samples were collected and appropriately packed, they were transported by courier observing chain-of-custody procedures to McCampbell Analytical, Inc. (State of California-certified testing laboratory #1644). Select samples from each of the four borings collected from depths of 4, 6, and 8 feet bgs were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Analytical Method SW8260B, diesel (TPHd) by Method SW8015B, petroleum oil and grease (motor oil) by Analytical Method SM5520E/F, benzene, toluene, ethylbenzene, and xylenes (BTEX) by Method SW8260B, and the fuel oxygenates tert-Amyl methyl ether (TAME), t-Butyl alcohol (TBA), Diisopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), and Mthyl-t-butyl ether (MtBE) by Method SW8260B.

### 4.2 Soil Analytical Results

A total of twelve (12) soil samples, three from each boring, were submitted for laboratory analysis. The only COC detected above laboratory detection limits in any of the samples submitted for analysis was 13 mg/Kg of TPHd in the sample collected at 4 feet bgs from boring SB-5. None of the other sample analytes were detected above laboratory detection limits in any of the samples submitted for analysis. A summary of the current and historical soil sampling analytical results are presented in Table 1. The complete laboratory data sheets are presented in Appendix D.

### 4.3 Grab Groundwater Laboratory Analytical Methods

Each of the four grab groundwater samples collected during this investigation were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Analytical Method SW8260B, , benzene, toluene, ethylbenzene, and xylenes (BTEX) by Method SW8260B, and the fuel oxygenates tert-Amyl methyl ether (TAME), t-Butyl alcohol (TBA), Diisopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), and Mthyl-t-butyl ether (MtBE) by Method SW8260B. Additionally, as requested by the oversight agency regulator, one groundwater sample (SB-4) was analyzed for TPHd by Method SW8015B and petroleum oil and grease (motor oil) by Analytical Method SM5520E/F.

### 4.4 Grab Groundwater Analytical Results

The only COCs detected above laboratory detection limits in any of the four samples submitted for analysis was 1.3 µg/L of ethylbenzene and 9.1 µg/L of xylenes (total) in the sample collected from boring SB-4 and 0.81 µg/L of xylenes (total) in the sample collected from boring SB-7. Each of these detected concentrations is well below their corresponding ESL. None of the other sample analytes were detected above laboratory detection limits in any of the samples submitted for analysis. A summary of the current and historical groundwater sampling analytical results are presented in Table 2. The complete laboratory data sheets are presented in Appendix D.

### 4.5 Discussion of Analytical Results

The purpose of this investigation was to fully delineate the lateral and vertical extent (if any) of the contamination identified in the 2009 investigation by OEI. During this current investigation, a total of twelve (12) soil samples and four (4) grab groundwater samples were collected from temporary borings advanced in and around the location of the former UST (Figure 2). No soil or groundwater contamination above applicable ESLs was identified in any of the soil or groundwater samples submitted for analysis, during this investigation (Tables 1 and 2). Furthermore, no soil or groundwater contamination was identified at concentrations above ESLs during a 2011 soil and groundwater investigation performed by PECI. Based upon the results of this investigation, plus a review of historical investigations at the site, the lateral and vertical extent of the minor petroleum hydrocarbon contamination identified during the 2009 investigation has been fully defined. Additionally, the subsurface does not appear to be significantly impacted by petroleum hydrocarbons or volatile fuel oxygenates resulting from a release associated with the existence of a former UST on-site. No further investigations are warranted at this time and this site should be reviewed for case closure by the oversight agency.

# 5.0 CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Conclusions

The following conclusions are based upon review of historical environmental reports, interpretation of analytical data, and field measurements collected during November 2012:

- A total of eight (8) soil samples and four (4) grab groundwater samples were collected and analyzed for TPHg, TPHd, motor oil, BTEX, MtBE, TAME, TBA, DIPE, and ETBE as part of this current investigation.
- No soil or groundwater contamination was identified in any of the soil or groundwater samples submitted for analysis, at concentrations above applicable RWQCB established ESLs.
- The lateral and vertical extent of the minor petroleum hydrocarbon contamination identified during a 2009 investigation has been fully defined. Furthermore, the subsurface does not appear to be significantly impacted by petroleum hydrocarbons or volatile fuel oxygenates resulting from a release associated with the existence of a former UST on-site.

## 5.2 Recommendations

Based on the data collected during this investigation and the above conclusions, Almar makes the following recommendations:

- No further action is recommended at this time. The site should be reviewed for case closure by the oversight agency.

# 6.0 CERTIFICATION AND DISTRIBUTION

To the best of our knowledge, all statements made in this report are true and correct. This report is based on data provided by the client and others, site conditions observed, samples collected, and analytical data. No warranty whatsoever is made that this report addresses all contamination found on the site.

Respectfully submitted,


Forrest N. Cook
California Professional Geologist #8201 (exp 9/14)

## 7.0 REFERENCES

California Regional Water Quality Control Board, San Francisco Bay Region (Water Board). East Bay Plains Beneficial Use Study, San Francisco Bay. June 15, 1999.

California Regional Water Quality Control Board, San Francisco Bay Region (Water Board). Water Quality Control Board (Basin Plan). January 18, 2007.

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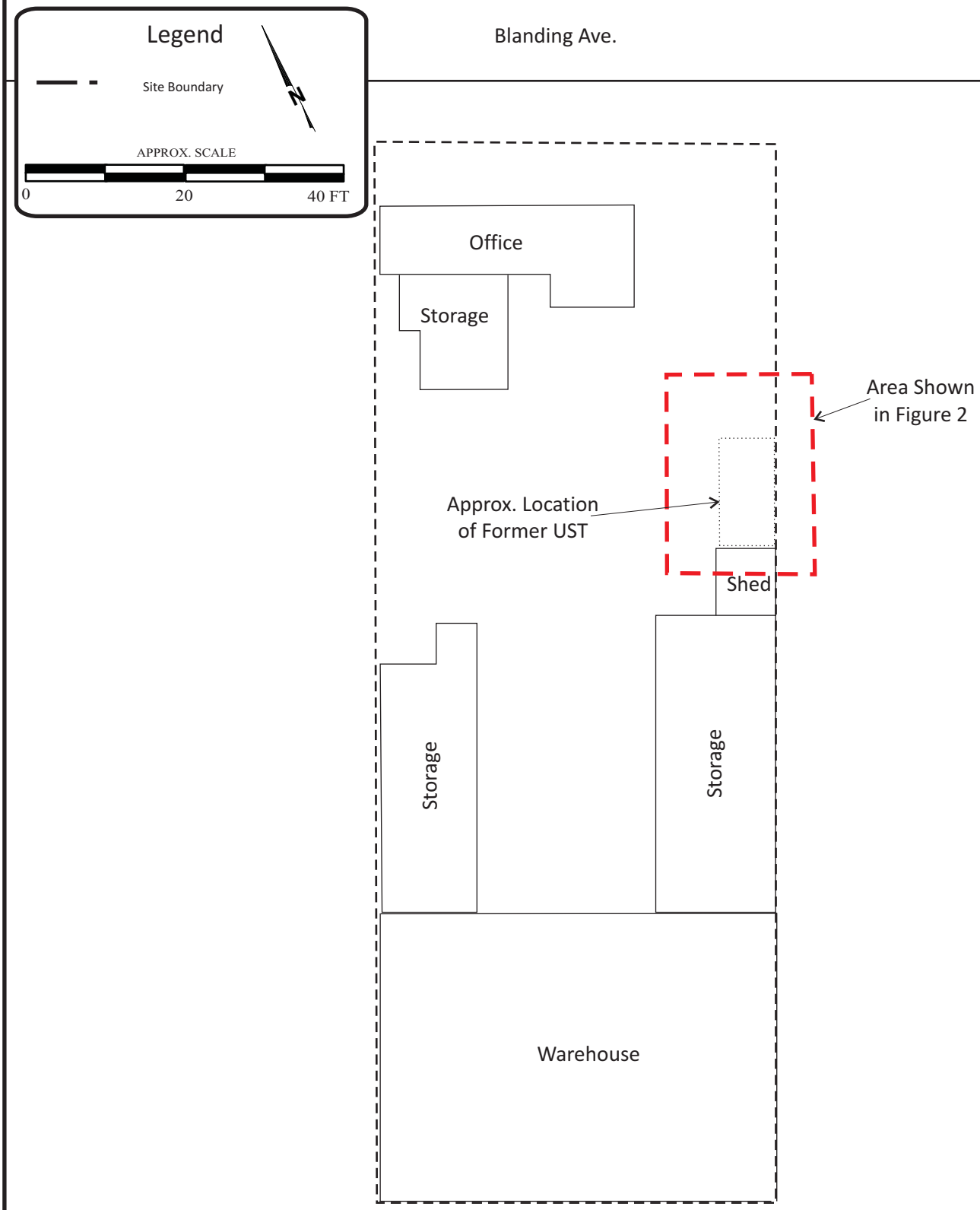
Pacific Engineering and Construction, Inc. (PECI). Soil and Groundwater Investigation Workplan, 2520 Blanding Avenue, Alameda, California. July 24, 2012.

Pacific Engineering and Construction, Inc. (PECI). Supplemental Groundwater Investigation, 2520 Blanding Avenue, Alameda, California. September, 2011.

United States Department of the Interior Geologic Survey (USGS). 1954, Revised 1994. Oakland-East, California 7.5-Minute Quadrangle.

# FIGURES



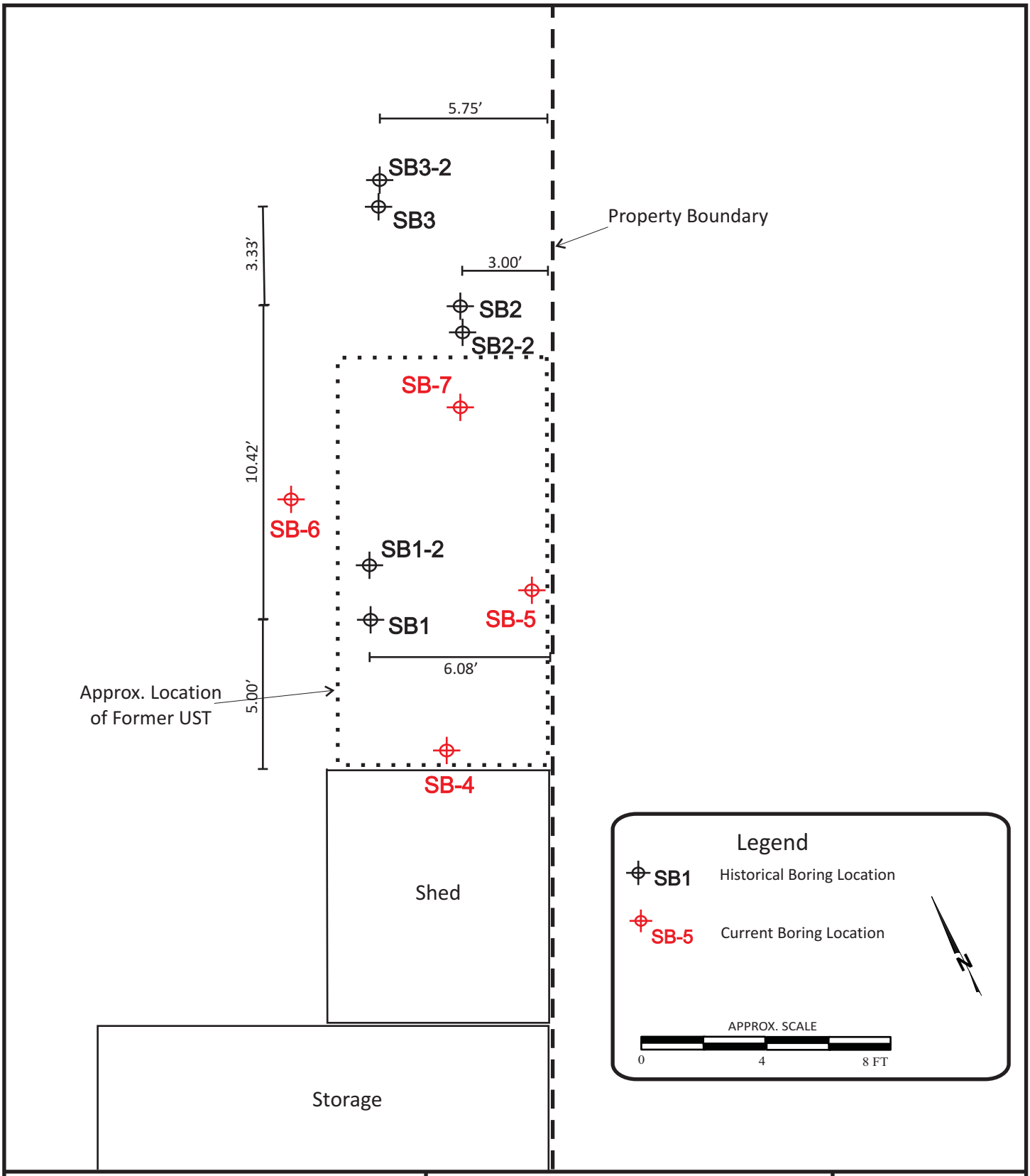

ALMAR environmental

**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

**SITE LOCATION MAP**

**FIGURE**

**1**




ALMAR environmental

**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

**SITE MAP**

**FIGURE**

**2**

# TABLES

**TABLE 1**
**SUMMARY OF SOIL ANALYTICAL DATA**
**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

| Sample ID | Sample Depth (ft.) | Sample Date | TPHg (mg/Kg) | TPHd (mg/Kg) | TPHmo (mg/Kg) | B (mg/Kg) | T (mg/Kg) | E (mg/Kg) | X (mg/Kg) | TAME (mg/Kg) | TBA (mg/Kg) | DIPE (mg/Kg) | ETBE (mg/Kg) | MtBE (mg/Kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SB-4d4.0** | 4 | 11/16/12 | ND<0.25 | ND<1.0 | ND<50 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-4d6.0** | 6 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-4d8.0** | 8 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-5d4.0** | 4 | 11/16/12 | ND<0.25 | **13** | ND<50 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-5d6.0** | 6 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-5d8.0** | 8 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-6d4.0** | 4 | 11/16/12 | ND<0.25 | --- | ND<50 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-6d6.0** | 6 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-6d8.0** | 8 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-7d4.0** | 4 | 11/16/12 | ND<0.25 | ND<1.0 | ND<50 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-7d6.0** | 6 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **SB-7d8.0** | 8 | 11/16/12 | ND<0.25 | --- | --- | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.005 | ND<0.05 | ND<0.005 | ND<0.005 | ND<0.005 |
| **HISTORICAL SOIL ANALYTICAL DATA** | | | | | | | | | | | | | | |
| **SB1-7** | 7 | 11/06/09 | **550** | **100** | **110** | ND | ND | **0.58** | **1.3** | --- | --- | --- | --- | ND |
| **SB2-7** | 7 | 11/06/09 | ND | ND | ND | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **SB3-7** | 7 | 11/06/09 | ND | ND | ND | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **ESL Residential** | | | **83** | **83** | **370** | **0.044** | **2.9** | **2.3** | **2.3** | **NA** | **0.075** | **NA** | **NA** | **0.023** |
| **ESLs Commercial/Industrial** | | | **83** | **83** | **2,500** | **0.044** | **2.9** | **3.3** | **2.3** | **NA** | **0.075** | **NA** | **NA** | **0.023** |

**Notes:**

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
NA = Not established
mg/Kg = micrograms per kilogram = parts per million = ppm
ESLs = Environmental Screening Levels shallow (<10m) soil (potential source of drinking water)
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MtBE = Methyl-t-butyl ether
TAME = tert-Amyl methyl ether
TBA = t-Butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether

**TABLE 2**
**SUMMARY OF GROUNDWATER ANALYTICAL DATA**
**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

| Sample ID | Sample Date | TPHg (µg/L) | TPHd (µg/L) | TPHmo (µg/L) | B (µg/L) | T (µg/L) | E (µg/L) | X (µg/L) | TAME (µg/L) | TBA (µg/L) | DIPE (µg/L) | ETBE (µg/L) | MtBE (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SB-4** | 11/16/12 | ND<50 | ND<50 | ND<500 | ND<0.5 | ND<0.5 | **1.3** | **9.1** | ND<0.5 | ND<2.0 | ND<0.5 | ND<0.5 | ND<0.5 |
| **SB-5** | 11/16/12 | ND<50 | --- | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<2.0 | ND<0.5 | ND<0.5 | ND<0.5 |
| **SB-6** | 11/16/12 | ND<50 | --- | --- | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 | ND<2.0 | ND<0.5 | ND<0.5 | ND<0.5 |
| **SB-7** | 11/16/12 | ND<50 | --- | --- | ND<0.5 | ND<0.5 | ND<0.5 | **0.81** | ND<0.5 | ND<2.0 | ND<0.5 | ND<0.5 | ND<0.5 |
| **HISTORICAL GROUNDWATER ANALYTICAL DATA** | | | | | | | | | | | | | |
| **SB1** | 11/06/09 | **4,900** | **14,000** | **15,000** | **14** | ND | **28** | **49** | --- | --- | --- | --- | ND |
| **SB1-2** | 08/03/11 | ND | **100** | **150** | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **SB2** | 11/06/09 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SB2-2** | 08/03/11 | ND | ND | ND | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **SB3** | 11/06/09 | ND | ND | ND | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **SB3-2** | 08/03/11 | ND | ND | ND | ND | ND | ND | ND | --- | --- | --- | --- | ND |
| **ESLs** | | **100** | **100** | **100** | **1.0** | **40** | **30** | **20** | **NA** | **12** | **NA** | **NA** | **5.0** |

**Notes:**

--- = Parameter not analyzed
<0.5 / ND = Not present at or above reporting detection limit
µg/L = micrograms per liter = parts per billion = ppb
ESLs = Environmental Screening Levels Groundwater (potential source of drinking water)
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MtBE = Methyl-t-butyl ether
TAME = tert-Amyl methyl ether
TBA = t-Butyl alcohol
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether

# APPENDIX A

## DIRECTIVE LETTERS

ALAMEDA COUNTY
**HEALTH CARE SERVICES**
AGENCY
ALEX BRISCOE, Director

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

September 27, 2012

Mr. Phillip Smith (sent via electronic mail to pjboise@aol.com)
PJ Smith Family LLC
PO Box 1542
Boise, ID 83701-1542

Subject: Conditional Work Plan Approval; Fuel Leak Case No. RO0003065 and GeoTracker Global ID T0600102132, Smith Commercial Property, 2520 Blanding Avenue, Alameda, CA 94501

Dear Mr. Smith:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file, including the *Soil and Groundwater Investigation Work Plan* (Work Plan) and the *Supplemental Groundwater Investigation Report Addendum* (Addendum), both dated July 24, 2012. These reports were prepared and submitted on your behalf by Pacific Engineering and Construction, Inc. (PECI). Thank you for submitting the reports to ACEH, claiming the site and uploading the reports to Geotracker. The Work Plan proposes the installation of four soil borings, in the four compass directions within or very close to the tank pit area to define the lateral extent of total petroleum hydrocarbons (TPH). The Addendum adequately addresses data deficiencies ACEH noted in the November 25, 2009 *Limited Soil and Groundwater Investigation* and the September 26, 2011 *Supplemental Groundwater Investigation Report*.

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 field investigation. 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 technical comments below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to: karel.detterman@acgov.org) prior to the start of field activities.

## TECHNICAL COMMENTS

**1. Clarification of Soil Boring Locations and Soil Sample Collection Criteria –**

**a. Soil Boring Locations** The Work Plan states that the soil boring placed along the eastern property line may be hand augured to get as close as possible to the property line, however in order to obtain the best and most comparable quality data, ACEH recommends using the direct push drill rig instead.

**b. Soil Sample Collection –** The Work Plan states that samples will be selected that will provide a vertical characterization of the contaminants of concern, but no criteria is provided. Since the goal of this investigation is to determine the lateral, down gradient, and vertical extent of total petroleum hydrocarbon (TPH) contamination in soil and groundwater beneath the site, ACEH recommends that soil samples should be collected and analyzed at intervals

of five feet, areas of obvious contamination, the soil/groundwater interface, and at significant changes in lithology. If staining, odor, or elevated PID readings are observed over an interval of several feet, a sufficient number of soil samples from this interval should be submitted for laboratory analyses to characterize the fuel hydrocarbon concentrations within this interval. Please ensure that the analytical results define the vertical and horizontal extent of TPH impacts at the site.

c. **Soil and Groundwater Analyses -** Please analyze all selected soil and groundwater samples by Method 8260 for TPH-Gasoline, benzene, toluene, ethyl benzene, and xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC), Methyl Tertiary-Butyl Ether (MTBE), Tert-amyl-methyl ether (TAME), Ethyl tert-butyl ether (ETBE), Di-isopropyl ether (DIPE), and t-Butyl alcohol (TBA).

2. **East Bay Plain Groundwater Basin -** Please note that at the present all groundwater in the City of Alameda which is located in the East Bay Plain Groundwater Basin is classified as 'MUN' (potentially suitable for municipal or domestic water supply). According to the San Francisco Regional Water Quality Control Board (SFRWQCB) Water Quality Control Plan (Basin Plan), dated January 18, 2007, for the San Francisco Bay Basin, "the term 'groundwater' includes all subsurface waters, whether or not these waters meet the classic definition of an aquifer or occurs within identified groundwater basins.' The Basin Plan also states that 'all groundwaters are considered suitable, or potentially suitable, for municipal or domestic water supply (MUN)." Therefore, the groundwater beneath the subject site must be considered beneficial for these uses unless shown to be non-beneficial using criteria presented in the Basin Plan.

3. **Geo Tracker Compliance –** Please continue to upload your reports to Geotracker so as to stay current.

**TECHNICAL REPORT REQUEST**

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

- **November 30, 2012** – Soil and Groundwater Investigation Report
  File to be named: SWI_R_yyyy-mm-dd_RO3065

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.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at karel.detterman@acgov.org or call me at (510) 567-6708.

Sincerely,

Karel Detterman, PG
Hazardous Materials Specialist

Enclosures: Responsible Party(ies) Legal Requirements/Obligations
ACEH Electronic Report Upload (ftp) Instructions

cc: Mark Waldman, Pacific Engineering and Construction, Inc., 35 Stillman Street, Ste. 126, San Francisco, CA 94107 (Sent via E-mail to:amwaldman@sbcglobal.net)

Miles Grant, Pacific Engineering and Construction, Inc., 35 Stillman Street, Ste. 126, San Francisco, CA 94107 (Sent via E-mail to: milesg2000@hotmail.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Karel Detterman, ACEH (Sent via E-mail to: karel.detterman@acgov.org)
GeoTracker, Electronic Case File

## Attachment 1

### Responsible Party(ies) Legal Requirements/Obligations

REPORT/DATA REQUESTS

These reports/data are being requested pursuant to Division 7 of the California Water Code (Water Quality), Chapter 6.7 of Division 20 of the California Health and Safety Code (Underground Storage of Hazardous Substances), and Chapter 16 of Division 3 of Title 23 of the California Code of Regulations (Underground Storage Tank Regulations).

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (Local Oversight Program [LOP] for unauthorized releases from petroleum Underground Storage Tanks [USTs], and Site Cleanup Program [SCP] for unauthorized releases of non-petroleum hazardous substances) require submission of reports in electronic format pursuant to Chapter 3 of Division 7, Sections 13195 and 13197.5 of the California Water Code, and Chapter 30, Articles 1 and 2, Sections 3890 to 3895 of Division 3 of Title 23 of the California Code of Regulations (23 CCR). Instructions for submission of electronic documents to the ACEH FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the ACEH FTP site is in addition to requirements for electronic submittal of information (ESI) to the State Water Resources Control Board's (SWRCB) Geotracker website. In April 2001, the SWRCB adopted 23 CCR, Division 3, Chapter 16, Article 12, Sections 2729 and 2729.1 (Electronic Submission of Laboratory Data for UST Reports). Article 12 required electronic submittal of analytical laboratory data submitted in a report to a regulatory agency (effective September 1, 2001), and surveyed locations (latitude, longitude and elevation) of groundwater monitoring wells (effective January 1, 2002) in Electronic Deliverable Format (EDF) to Geotracker. Article 12 was subsequently repealed in 2004 and replaced with Article 30 (Electronic Submittal of Information) which expanded the ESI requirements to include electronic submittal of any report or data required by a regulatory agency from a cleanup site. The expanded ESI submittal requirements for petroleum UST sites subject to the requirements of 23 CCR, Division, 3, Chapter 16, Article 11, became effective December 16, 2004. All other electronic submittals required pursuant to Chapter 30 became effective January 1, 2005. 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, 7835, 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, late 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 SCP) | **REVISION DATE:** July 25, 2012 |
|---|---|
| | **ISSUE DATE:** July 5, 2005 |
| | **PREVIOUS REVISIONS:** October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010 |
| **SECTION:** Miscellaneous Administrative Topics & Procedures | **SUBJECT:** Electronic Report Upload (ftp) Instructions |

The Alameda County Environmental Cleanup Oversight Programs (petroleum UST and SCP) 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 .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 ://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 .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

## ACPWA DRILLING PERMIT

# Alameda County Public Works Agency - Water Resources Well Permit

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

**Application Approved on: 11/06/2012 By jamesy**

**Permit Numbers: W2012-0779**
**Permits Valid from 11/14/2012 to 11/14/2012**

| | | | |
|---|---|---|---|
| **Application Id:** | 1351619096589 | **City of Project Site:** | Alameda |
| **Site Location:** | 2520 Blanding Ave., Alameda, CA | | |
| **Project Start Date:** | 11/14/2012 | **Completion Date:** | 11/14/2012 |
| **Assigned Inspector:** | Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org | | |
| **Applicant:** | Almar Environmental - Forrest Cook<br>407 Almar Ave., Santa Cruz, CA 95060 | **Phone:** | 831-420-7923 |
| **Property Owner:** | Phillip Smith<br>PO Box 1542, Boise, ID 83701 | **Phone:** | -- |
| **Client:** | ** same as Property Owner ** | | |
| **Contact:** | Forrest Cook | **Phone:**<br>**Cell:** | --<br>-- |

**Total Due:** $265.00
**Receipt Number: WR2012-0360** **Total Amount Paid:** $265.00
**Payer Name : Forrest N Cook** Paid By: VISA **PAID IN FULL**

**Works Requesting Permits:**

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 4 Boreholes
Driller: Environmental Control Associates - Lic #: 695970 - Method: DP **Work Total: $265.00**

**Specifications**

| Permit Number | Issued Dt | Expire Dt | # Boreholes | Hole Diam | Max Depth |
|---|---|---|---|---|---|
| W2012-0779 | 11/06/2012 | 02/12/2013 | 4 | 2.00 in. | 15.00 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 Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org 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. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

6. 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.

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

## BORING LOGS

FIELD LOCATION OF BORING:

PROJECT: # 1006 DATES DRILLED: 11/16/12

CLIENT: EnviroNova DRILLER: ECA (C-57# 695970)

SITE ADDRESS: 2520 Blanding Ave., Alameda, CA LOGGED BY: Forrest Cook PG#8201



DRILLING METHOD AND EQUIPMENT: GeoProbe w/Direct Push Sampler

| WATER LEVEL | | TIME | |
|---|---|---|---|
| 1st Encountered | 4.00 | Start | |
| Static | 8.30 | Finish | |

| Depth (Feet) | Sample | Sample ID | Blow Count | PID (ppm) | Well Const. | Lithology | USCS | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| 1–3 | | | | | Backfilled with neat cement | | SM | SILTY SAND (SM): Dark brown (7.5YR3/2), well sorted, coarse, moist, estimated loose. |
| 4 | | SB-4d4.0 | | | | | | ▽ 1st encountered water, sample is very moist to saturated. |
| 4–5 | | | | | | | | grades to olive gray (5Y5/2), wet. |
| 6 | | SB-4d6.0 | | | | | | |
| 7–8 | | SB-4d8.0 | | | | | | ▼ Static water = 8.00’ |
| 9–11 | | | | | | | CL | SILTY CLAY (CL):Gray (5Y6/1) with rust colored mottling, moist to damp, estimated medium plasticity, estimated firm. |
| 12 | | | | | | | | Bottom of Hole = 12’ |
| 13–25 | | | | | | | | |

WELL / BORING CONSTRUCTION DETAILS:

Backfilled with neat cement grout (Portland Type II)

ALMAR environmental

2520 BLANDING AVENUE
ALAMEDA, CALIFORNIA

BORING LOG

BORING

SB-4

FIELD LOCATION OF BORING:

PROJECT: # 1006 DATES DRILLED: 11/16/12

CLIENT: EnviroNova DRILLER: ECA (C-57# 695970)

SITE ADDRESS: 2520 Blanding Ave., Alameda, CA LOGGED BY: Forrest Cook PG#8201



DRILLING METHOD AND EQUIPMENT: GeoProbe w/Direct Push Sampler

| WATER LEVEL | | TIME | |
|---|---|---|---|
| 1st Encountered | 4.5 | Start | |
| Static | 3.80 | Finish | |

| Depth (Feet) | Sample | Sample ID | Blow Count | PID (ppm) | Well Const. | Lithology | USCS | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| 1–3 | | | | | Backfilled with neat cement | | SM | SILTY SAND (SM): Dark brown (7.5YR3/2), well sorted, coarse, moist, estimated loose. |
| 4 | | SB-5d4.0 | | | | | | ▼ Static water = 3.80’ |
| 5 | | | | | | | | ▽ 1st encountered water, sample is very moist to saturated. |
| 6 | | SB-5d6.0 | | | | | | grades to olive gray (5Y5/2), wet. |
| 7–8 | | SB-5d8.0 | | | | | | |
| 9–10 | | | | | | | CL | SILTY CLAY (CL):Gray (5Y6/1) with rust colored mottling, moist to damp, estimated medium plasticity, estimated firm. |
| | | | | | | | | Bottom of Hole = 10’ |
| 11–25 | | | | | | | | |

**WELL / BORING CONSTRUCTION DETAILS:**

Backfilled with neat cement grout (Portland Type II)

ALMAR environmental

**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

**BORING LOG**

**BORING**

**SB-5**

FIELD LOCATION OF BORING:

PROJECT: # 1006 DATES DRILLED: 11/16/12

CLIENT: EnviroNova DRILLER: ECA (C-57# 695970)

SITE ADDRESS: 2520 Blanding Ave., Alameda, CA LOGGED BY: Forrest Cook PG#8201



DRILLING METHOD AND EQUIPMENT: GeoProbe w/Direct Push Sampler

| WATER LEVEL | | TIME | |
|---|---|---|---|
| 1st Encountered | 4.25 | Start | |
| Static | 9.88 | Finish | |

| Depth (Feet) | Sample | Sample ID | Blow Count | PID (ppm) | Well Const. | Lithology | USCS | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| 1–3 | | | | | Backfilled with neat cement | | SM | SILTY SAND (SM): Dark brown (7.5YR3/2), well sorted, coarse, moist, estimated loose. |
| 4 | | SB-6d4.0 | | | | | | ▽1st encountered water, sample is very moist to wet. grades to olive gray (5Y5/2) |
| 6 | | SB-6d6.0 | | | | | | |
| 8 | | SB-6d8.0 | | | | | | |
| 10 | | | | | | | | ▼ Static water = 9.88’ (very slow recharge rate) |
| 11–12 | | | | | | | CL | SILTY CLAY (CL):Gray (5Y6/1) with rust colored mottling, moist to damp, estimated medium plasticity, estimated firm. |
| 12 | | | | | | | | Bottom of Hole = 12’ |
| 13–25 | | | | | | | | |

**WELL / BORING CONSTRUCTION DETAILS:**

Backfilled with neat cement grout (Portland Type II)

ALMAR environmental

**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

**BORING LOG**

**BORING**

**SB-6**

FIELD LOCATION OF BORING:

PROJECT: # 1006 DATES DRILLED: 11/16/12

CLIENT: EnviroNova DRILLER: ECA (C-57# 695970)

SITE ADDRESS: 2520 Blanding Ave., Alameda, CA LOGGED BY: Forrest Cook PG#8201



DRILLING METHOD AND EQUIPMENT: GeoProbe w/Direct Push Sampler

| WATER LEVEL | | TIME | |
|---|---|---|---|
| 1st Encountered | 4.50 | Start | |
| Static | 8.05 | Finish | |

| Depth (Feet) | Sample | Sample ID | Blow Count | PID (ppm) | Well Const. | Lithology | USCS | SOIL DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| 1–3 | | | | | Backfilled with neat cement | | SM | SILTY SAND (SM): Dark brown (7.5YR3/2), well sorted, coarse, moist, estimated loose. |
| 4 | | SB-7d4.0 | | | | | | ▽1st encountered water, sample is very moist to wet. grades to olive gray (5Y5/2) |
| 6 | | SB-7d6.0 | | | | | | |
| 8 | | SB-7d8.0 | | | | | | ▼ Static water = 8.05’ (very slow recharge rate) |
| 10–12 | | | | | | | CL | SILTY CLAY (CL):Gray (5Y6/1) with rust colored mottling, moist to damp, estimated medium plasticity, estimated firm. |
| 12 | | | | | | | | Bottom of Hole = 12’ |
| 13–25 | | | | | | | | |

**WELL / BORING CONSTRUCTION DETAILS:**

Backfilled with neat cement grout (Portland Type II)

ALMAR environmental

**2520 BLANDING AVENUE**
**ALAMEDA, CALIFORNIA**

**BORING LOG**

**BORING**

**SB-7**

# APPENDIX D

## ANALYTIAL LABOARTORY DATA SHEETS

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

# Analytical Report

| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Reported: 11/27/12 |
| Novato, CA 94949 | Client P.O.: | Date Completed: 11/27/12 |

**WorkOrder: 1211500**

November 27, 2012

Dear Basil:

Enclosed within are:

1) The results of the **16** analyzed samples from your project: **#12-155; 2520 Blanding Ave,**
2) QC data for the above samples, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

***The analytical results relate only to the items tested.***

# McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701 1211500
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

# CHAIN OF CUSTODY RECORD

**TURN AROUND TIME** ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

**GeoTracker EDF** ☐ **PDF** ☑ **Excel** ☐ **Write On (DW)** ☐

☐ Check if sample is effluent and "J" flag is required

**Report To:** BASIL FALCONE **Bill To:** ENVIRONOVA

**Company:** ENVIRONOVA

9 Commercial BLVD SUITE 175
NOVATO, CA. 94945

**E-Mail:** bfalcone@environova.com

**Tele:** (415) 599-6657 **Fax:** ( )

**Project #:** 12-155 **Project Name:** 2520 Blanding Ave

**Project Location:** 2520 Blanding Ave. ALAMEDA

**Sampler Signature:**

| SAMPLE ID | LOCATION/ Field Point Name | SAMPLING Date | SAMPLING Time | # Containers | Type Containers | MATRIX: Water | Soil | Air | Sludge | Other | METHOD PRESERVED: ICE | HCL | $HNO_3$ | Other | BTEX & TPH as Gas (602 / 8021 + 8015) MTBE By 8260 | TPH as Diesel (8015) | Total Petroleum Oil & Grease (1664 / 5520 E/B&F) | Total Petroleum Hydrocarbons (418.1) | EPA 502.2 / 601 / 8010 / 8021 (HVOCs) | MTBE / BTEX ONLY (EPA 602 / 8021) | EPA 505/ 608 / 8081 (Cl Pesticides) | EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners | EPA 507 / 8141 (NP Pesticides) | EPA 515 / 8151 (Acidic Cl Herbicides) | EPA 524.2 / 624 / 8260 (VOCs) | EPA 525.2 / 625 / 8270 (SVOCs) | EPA 8270 SIM / 8310 (PAHs / PNAs) | CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) | LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) | Lead (200.7 / 200.8 / 6010 / 6020) | Filter sample for DISSOLVED metals analysis | OXYS (EDB EDC, MTBE, TAME, ETBE, DIPE, TBA - 8260) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB4d-4.0 | | 11/16/20 | 9:30 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | DO NOT |
| SB4d-6.0 | | 11/16/20 | 9:35 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | RUN FOR LEAD |
| SB4d-8.0 | | 11/16/20 | 9:40 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | |
| SB6d-4.0 | | 11/16/20 | 10:30 | 1 | PL | | X | | | | | | | | X | X | X | | | | | | | | | | | | | | X | | |
| SB6d-6.0 | | 11/16/20 | 10:35 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | |
| SB6d-8.0 | | 11/16/20 | 10:40 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | |
| SB5d-4.0 | | 11/16/20 | 10:00 | 1 | PL | | X | | | | | | | | X | X | X | | | | | | | | | | | | | | X | | |
| SB5d-6.0 | | 11/16/20 | 10:05 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | |
| SB5d-8.0 | | 11/16/20 | 10:10 | 1 | PL | | X | | | | | | | | X | | | | | | | | | | | | | | | | X | | |

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Tyrone Ellis | 11/16/20 | 1300 | |
| Relinquished By: | Date: | Time: | Received By: |
| | 11/16 | 1911 | |
| Relinquished By: | Date: | Time: | Received By: |
| | | | |

ICE/t° 4.2
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS: MAKE SURE TO USE METHOD 8260

VOAS O&G METALS OTHER
PRESERVATION pH<2

# McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

# CHAIN OF CUSTODY RECORD

**TURN AROUND TIME** ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

**GeoTracker EDF** ☐ **PDF** ☑ **Excel** ☐ **Write On (DW)** ☐

☐ Check if sample is effluent and "J" flag is required

Report To: BASIL Falcone Bill To: ENVIRONOVA

Company: ENVIRONOVA

9 Commercial Blvd Suite 175

Novato, CA 94945 E-Mail:

Tele: (415) 599-6657 Fax: ( )

Project #: 12-155 Project Name: 2520 Blanding Ave

Project Location: 2520 Blanding Ave Alameda

Sampler Signature:

| SAMPLE ID | LOCATION/ Field Point Name | SAMPLING Date | SAMPLING Time | # Containers | Type Containers | MATRIX Water | MATRIX Soil | MATRIX Air | MATRIX Sludge | MATRIX Other | METHOD PRESERVED ICE | METHOD PRESERVED HCL | METHOD PRESERVED $HNO_3$ | METHOD PRESERVED Other | BTEX & TPH as Gas (~~602 / 8021 / 8260 / MTBE~~ BY 8260) | TPH as Diesel (8015) | Total Petroleum Oil & Grease (1664 / 5520 E/B&F) | Total Petroleum Hydrocarbons (418.1) | EPA 502.2 / 601 / 8010 / 8021 (HVOCs) | MTBE / BTEX ONLY (EPA 602 / 8021) | EPA 505/ 608 / 8081 (Cl Pesticides) | EPA 608 / 8082 PCB's ONLY; Arocolors / Congeners | EPA 507 / 8141 (NP Pesticides) | EPA 515 / 8151 (Acidic Cl Herbicides) | EPA 524.2 / 624 / 8260 (VOCs) | EPA 525.2 / 625 / 8270 (SVOCs) | EPA 8270 SIM / 8310 (PAHs / PNAs) | CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) | LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) | Lead (200.7 / 200.8 / 6010 / 6020) | Filter sample for DISSOLVED metals analysis | Other: Oxy's (EDB EDC MTBE TAME ETBE DIPE TBA - 8260) | Other | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB7-4.0 | | 11/16/20 | 11:00 | PL | 1 | | X | | | | | | | | X | X | X | | | | | | | | | | | | | | | X | | |
| SB7-6.0 | | 11/16/20 | 11:05 | PL | 1 | | X | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| SB8-8.0 | | 11/16/20 | 11:10 | PL | 1 | | X | | | | | | | | X | | | | | | | | | | | | | | | | | X | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| x1 SB4 | | 11/16/20 | 9:30 | 5 | GL | X | | | | | | X | | | X | X | X | | | | | | | | | | | | | | | X | | |
| x10 SB5 | | 11/16/20 | 10:50 | 5 | GL | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | X | | |
| x30 SB6 | | 11/16/20 | 11:30 | 5 | GL | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | X | | |
| ~~SB7~~ TB | | | | 5 | GL | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| x5 SB7 | | 11/16/20 | 11:40 | 4 | GL | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | X | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Comments:** **Indicate here if these samples are potentially dangerous to handle:

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| | 11/16/20 | 1300 | |
| Relinquished By: | Date: | Time: | Received By: |
| | 11-16 | 1941 | |
| Relinquished By: | Date: | Time: | Received By: |
| | | | |

ICE/t°_____
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

COMMENTS: Make sure to use Method 8260

| | VOAS | O&G | METALS | OTHER |
|---|---|---|---|---|
| PRESERVATION | | | pH<2 | |

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1211500** **ClientCode: EVNN**

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

**Report to:**
Basil Falcone
EnviroNova
9 Commercial Blvd, Ste. 175
Novato, CA 94949
415-883-7575 FAX: 415-883-7475

Email: bfalcone@environova.com; tevans@enviro
cc:
PO:
ProjectNo: #12-155; 2520 Blanding Ave

**Bill to:**
Accounts Payable
EnviroNova
9 Commercial Blvd, Ste. 175
Novato, CA 94949
esnyder@environova.com

**Requested TAT:** **5 days**

***Date Received:*** **11/16/2012**
***Date Printed:*** **11/17/2012**

| 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 |
| 1211500-001 | SB4d-4.0 | Soil | 11/16/2012 9:30 | ☐ | | A | A | | A | | | | | | | |
| 1211500-002 | SB4d-6.0 | Soil | 11/16/2012 9:35 | ☐ | | | A | | | | | | | | | |
| 1211500-003 | SB4d-8.0 | Soil | 11/16/2012 9:40 | ☐ | | | A | | | | | | | | | |
| 1211500-004 | SB6d-4.0 | Soil | 11/16/2012 10:30 | ☐ | | A | A | | A | | | | | | | |
| 1211500-005 | SB6d-6.0 | Soil | 11/16/2012 10:35 | ☐ | | | A | | | | | | | | | |
| 1211500-006 | SB6d-8.0 | Soil | 11/16/2012 10:40 | ☐ | | | A | | | | | | | | | |
| 1211500-007 | SB5d-4.0 | Soil | 11/16/2012 10:00 | ☐ | | A | A | | A | | | | | | | |
| 1211500-008 | SB5d-6.0 | Soil | 11/16/2012 10:05 | ☐ | | | A | | | | | | | | | |
| 1211500-009 | SB5d-8.0 | Soil | 11/16/2012 10:10 | ☐ | | | A | | | | | | | | | |
| 1211500-010 | SB7d-4.0 | Soil | 11/16/2012 11:00 | ☐ | | A | A | | A | | | | | | | |
| 1211500-011 | SB7d-6.0 | Soil | 11/16/2012 11:05 | ☐ | | | A | | | | | | | | | |
| 1211500-012 | SB7d-8.0 | Soil | 11/16/2012 11:10 | ☐ | | | A | | | | | | | | | |
| 1211500-013 | SB4 | Water | 11/16/2012 9:50 | ☐ | B | | | A | | B | | | | | | |
| 1211500-014 | SB5 | Water | 11/16/2012 10:50 | ☐ | | | | A | | | | | | | | |

**Test Legend:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5520B_SG_W | 2 | 5520E_SG_S | 3 | GAS8260_S | 4 | GAS8260_W | 5 | TPH(D)_S |
| 6 | TPH(D)_W | 7 | | 8 | | 9 | | 10 | |
| 11 | | 12 | | | | | | | |

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A contain testgroup.

**Prepared by: Zoraida Cortez**

**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.

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1211500** **ClientCode: EVNN**

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

**Report to:**
Basil Falcone
EnviroNova
9 Commercial Blvd, Ste. 175
Novato, CA 94949
415-883-7575 FAX: 415-883-7475

Email: bfalcone@environova.com; tevans@enviro
cc:
PO:
ProjectNo: #12-155; 2520 Blanding Ave

**Bill to:**
Accounts Payable
EnviroNova
9 Commercial Blvd, Ste. 175
Novato, CA 94949
esnyder@environova.com

**Requested TAT:** **5 days**

***Date Received:*** **11/16/2012**
***Date Printed:*** **11/17/2012**

| 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 |
| 1211500-015 | SB6 | Water | 11/16/2012 11:30 | ☐ | | | | A | | | | | | | | |
| 1211500-016 | SB7 | Water | 11/16/2012 11:40 | ☐ | | | | A | | | | | | | | |

**Test Legend:**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 5520B_SG_W | 2 | 5520E_SG_S | 3 | GAS8260_S | 4 | GAS8260_W | 5 | TPH(D)_S |
| 6 | TPH(D)_W | 7 | | 8 | | 9 | | 10 | |
| 11 | | 12 | | | | | | | |

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A contain testgroup.

**Prepared by: Zoraida Cortez**

**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.

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

# Sample Receipt Checklist

Client Name: **EnviroNova** Date and Time Received: **11/16/2012 7:56:42 PM**

Project Name: **#12-155; 2520 Blanding Ave** LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1211500** Matrix: Soil/Water Carrier: David Valles (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 ☐ | |
| Container/Temp Blank temperature | Cooler Temp: 4.2°C | | NA ☐ |
| Water - VOA vials have zero headspace / no bubbles? | Yes ☑ | No ☐ | No VOA vials submitted ☐ |
| Sample labels checked for correct preservation? | Yes ☑ | No ☐ | |
| Metal - pH acceptable upon receipt (pH<2)? | Yes ☐ | No ☐ | NA ☑ |
| Samples Received on Ice? | Yes ☑ | No ☐ | |

(Ice Type: WET ICE )

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

Comments:

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

| | | |
|---|---|---|
| EnviroNova<br><br>9 Commercial Blvd, Ste. 175<br><br>Novato, CA 94949 | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| | Client Contact: Basil Falcone | Date Extracted 11/20/12 |
| | Client P.O.: | Date Analyzed 11/21/12 |

**Petroleum Oil & Grease with Silica Gel Clean-Up***

Extraction method: SM5520B/F Analytical methods: SM5520B/F Work Order: 1211500

| Lab ID | Client ID | Matrix | POG | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 1211500-013B | SB4 | W | ND | 1 | N/A | b6,b1 |
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|---|---|---|---|
| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | 5.0 | mg/L |
| | S | NA | NA |

* water samples are reported in mg/L; reporting limit may change due to variable water sample volume.

DF = dilution factor (may be raised to dilute target analyte or matrix interference).
%SS = Percent Recovery of Surrogate Standard
# surrogate diluted out of range or not applicable to this sample.

b1) aqueous sample that contains greater than ~1 vol. % sediment
b6) lighter than water immiscible sheen/product is present

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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http://www.mccampbell.com / E-mail: main@mccampbell.com

| | | |
|---|---|---|
| EnviroNova<br><br>9 Commercial Blvd, Ste. 175<br><br>Novato, CA 94949 | Client Project ID: #12-155; 2520 Blanding Ave<br>Client Contact: Basil Falcone<br>Client P.O.: | Date Sampled: 11/16/12<br>Date Received: 11/16/12<br>Date Extracted 11/16/12<br>Date Analyzed 11/21/12 |

**Petroleum Oil & Grease with Silica Gel Clean-Up***

Extraction method: SM5520E/F Analytical methods: SM5520E/F Work Order: 1211500

| Lab ID | Client ID | Matrix | POG | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 1211500-001A | SB4d-4.0 | S | ND | 1 | N/A | |
| 1211500-004A | SB6d-4.0 | S | ND | 1 | N/A | |
| 1211500-007A | SB5d-4.0 | S | ND | 1 | N/A | |
| 1211500-010A | SB7d-4.0 | S | ND | 1 | N/A | |
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| | | | |
|---|---|---|---|
| Reporting Limit for DF =1;<br>ND means not detected at or<br>above the reporting limit | W | NA | NA |
| | S | 50 | mg/Kg |

* water samples and all TCLP & SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.

DF = dilution factor (may be raised to dilute target analyte or matrix interference).
%SS = Percent Recovery of Surrogate Standard
# surrogate diluted out of range or not applicable to this sample.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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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

| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted: 11/16/12-11/21/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed: 11/21/12 |

## Oxygenated Volatile Organics & BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1211500

| Lab ID | 1211500-001A | 1211500-002A | 1211500-003A | 1211500-004A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | SB4d-4.0 | SB4d-6.0 | SB4d-8.0 | SB6d-4.0 | | |
| Matrix | S | S | S | S | | |
| DF | 1 | 1 | 1 | 1 | S | W |
| **Compound** | **Concentration** | | | | mg/kg | ug/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND | ND | 0.005 | NA |
| Benzene | ND | ND | ND | ND | 0.005 | NA |
| t-Butyl alcohol (TBA) | ND | ND | ND | ND | 0.05 | NA |
| Diisopropyl ether (DIPE) | ND | ND | ND | ND | 0.005 | NA |
| Ethylbenzene | ND | ND | ND | ND | 0.005 | NA |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND | ND | 0.005 | NA |
| Methyl-t-butyl ether (MTBE) | ND | ND | ND | ND | 0.005 | NA |
| Toluene | ND | ND | ND | ND | 0.005 | NA |
| Xylenes, Total | ND | ND | ND | ND | 0.005 | NA |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 92 | 95 | 91 | 96 | | |
| %SS2: | 115 | 115 | 116 | 118 | | |
| **Comments** | | | | | | |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted: 11/16/12-11/21/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed: 11/21/12 |

## Oxygenated Volatile Organics & BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1211500

| Lab ID | 1211500-005A | 1211500-006A | 1211500-007A | 1211500-008A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | SB6d-6.0 | SB6d-8.0 | SB5d-4.0 | SB5d-6.0 | | |
| Matrix | S | S | S | S | | |
| DF | 1 | 1 | 1 | 1 | S | W |
| **Compound** | **Concentration** | | | | mg/kg | ug/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND | ND | 0.005 | NA |
| Benzene | ND | ND | ND | ND | 0.005 | NA |
| t-Butyl alcohol (TBA) | ND | ND | ND | ND | 0.05 | NA |
| Diisopropyl ether (DIPE) | ND | ND | ND | ND | 0.005 | NA |
| Ethylbenzene | ND | ND | ND | ND | 0.005 | NA |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND | ND | 0.005 | NA |
| Methyl-t-butyl ether (MTBE) | ND | ND | ND | ND | 0.005 | NA |
| Toluene | ND | ND | ND | ND | 0.005 | NA |
| Xylenes, Total | ND | ND | ND | ND | 0.005 | NA |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 92 | 94 | 91 | 91 | | |
| %SS2: | 119 | 118 | 119 | 115 | | |
| **Comments** | | | | | | |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted: 11/16/12-11/21/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed: 11/21/12 |

## Oxygenated Volatile Organics & BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1211500

| Lab ID | 1211500-009A | 1211500-010A | 1211500-011A | 1211500-012A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | SB5d-8.0 | SB7d-4.0 | SB7d-6.0 | SB7d-8.0 | | |
| Matrix | S | S | S | S | | |
| DF | 1 | 1 | 1 | 1 | S | W |
| **Compound** | **Concentration** | | | | mg/kg | ug/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND | ND | 0.005 | NA |
| Benzene | ND | ND | ND | ND | 0.005 | NA |
| t-Butyl alcohol (TBA) | ND | ND | ND | ND | 0.05 | NA |
| Diisopropyl ether (DIPE) | ND | ND | ND | ND | 0.005 | NA |
| Ethylbenzene | ND | ND | ND | ND | 0.005 | NA |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND | ND | 0.005 | NA |
| Methyl-t-butyl ether (MTBE) | ND | ND | ND | ND | 0.005 | NA |
| Toluene | ND | ND | ND | ND | 0.005 | NA |
| Xylenes, Total | ND | ND | ND | ND | 0.005 | NA |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 91 | 89 | 90 | 89 | | |
| %SS2: | 116 | 111 | 112 | 116 | | |
| **Comments** | | | | | | |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or surrogate coelutes with another peak.

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| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted: 11/19/12-11/20/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed: 11/19/12-11/20/12 |

## Oxygenated Volatile Organics & BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1211500

| Lab ID | 1211500-013A | 1211500-014A | 1211500-015A | 1211500-016A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | SB4 | SB5 | SB6 | SB7 | | |
| Matrix | W | W | W | W | | |
| DF | 1 | 1 | 1 | 1 | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND | ND | NA | 0.5 |
| Benzene | ND | ND | ND | ND | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND | ND | ND | NA | 2.0 |
| Diisopropyl ether (DIPE) | ND | ND | ND | ND | NA | 0.5 |
| Ethylbenzene | 1.3 | ND | ND | ND | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND | ND | NA | 0.5 |
| Methyl-t-butyl ether (MTBE) | ND | ND | ND | ND | NA | 0.5 |
| Toluene | ND | ND | ND | ND | NA | 0.5 |
| Xylenes, Total | 9.1 | ND | ND | 0.81 | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 100 | 99 | 100 | 99 | | |
| %SS2: | 94 | 94 | 94 | 95 | | |
| **Comments** | b1 | b1 | b1 | b1 | | |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted 11/16/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed 11/21/12 |

## TPH(g) by Purge & Trap and GC/MS*

Extraction method: SW5030B | Analytical methods: SW8260B | Work Order: 1211500

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 001A | SB4d-4.0 | S | ND | 1 | 100 | |
| 002A | SB4d-6.0 | S | ND | 1 | 99 | |
| 003A | SB4d-8.0 | S | ND | 1 | 101 | |
| 004A | SB6d-4.0 | S | ND | 1 | 102 | |
| 005A | SB6d-6.0 | S | ND | 1 | 103 | |
| 006A | SB6d-8.0 | S | ND | 1 | 102 | |
| 007A | SB5d-4.0 | S | ND | 1 | 103 | |
| 008A | SB5d-6.0 | S | ND | 1 | 100 | |
| 009A | SB5d-8.0 | S | ND | 1 | 100 | |
| 010A | SB7d-4.0 | S | ND | 1 | N/A | |
| 011A | SB7d-6.0 | S | ND | 1 | N/A | |
| 012A | SB7d-8.0 | S | ND | 1 | N/A | |
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|---|---|---|---|
| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | NA | NA |
| | S | 0.25 | mg/kg |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted 11/19/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed 11/19/12 |

## TPH(g) by Purge & Trap and GC/MS*

Extraction method: SW5030B | Analytical methods: SW8260B | Work Order: 1211500

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 013A | SB4 | W | ND | 1 | 105 | b1 |
| 014A | SB5 | W | ND | 1 | 105 | b1 |
| 015A | SB6 | W | ND | 1 | 105 | b1 |
| 016A | SB7 | W | ND | 1 | 106 | b1 |
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| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | 50 | µg/L |
| | S | NA | NA |

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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| | | |
|---|---|---|
| EnviroNova | Client Project ID: #12-155; 2520 Blanding Ave | Date Sampled: 11/16/12 |
| | | Date Received: 11/16/12 |
| 9 Commercial Blvd, Ste. 175 | Client Contact: Basil Falcone | Date Extracted 11/16/12 |
| Novato, CA 94949 | Client P.O.: | Date Analyzed 11/17/12-11/20/12 |

**Total Extractable Petroleum Hydrocarbons***

Extraction method: SW3510C/SW3550B Analytical methods: SW8015B Work Order: 1211500

| Lab ID | Client ID | Matrix | TPH-Diesel (C10-C23) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 1211500-001A | SB4d-4.0 | S | ND | 1 | 84 | |
| 1211500-007A | SB5d-4.0 | S | 13 | 2 | 93 | e7,e2 |
| 1211500-010A | SB7d-4.0 | S | ND | 1 | 95 | |
| 1211500-013B | SB4 | W | ND | 1 | 72 | b1 |
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|---|---|---|---|
| Reporting Limit for DF =1; ND means not detected at or above the reporting limit | W | 50 | µg/L |
| | S | 1.0 | mg/Kg |

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
b1) aqueous sample that contains greater than ~1 vol. % sediment
e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant

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# QC SUMMARY REPORT FOR SM5520B/F

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72479 | WorkOrder: 1211500

**EPA Method: SM5520B/F** **Extraction: SM5520B/F** **Spiked Sample ID: N/A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/L | mg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| POG | N/A | 10.42 | N/A | N/A | N/A | 97.5 | N/A | N/A | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72479 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-013B | 11/16/12 9:50 AM | 11/20/12 | 11/21/12 10:00 AM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer

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# QC SUMMARY REPORT FOR SM5520E/F

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 72478 | WorkOrder: 1211500

**EPA Method: SM5520E/F** **Extraction: SM5520E/F** **Spiked Sample ID: 1211433-001A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/Kg | mg/Kg | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| POG | 1100 | 2000 | 96.6 | 104 | 4.91 | 94.2 | 70 - 130 | 30 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72478 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-001A | 11/16/12 9:30 AM | 11/16/12 | 11/21/12 5:10 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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# QC SUMMARY REPORT FOR SM5520E/F

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 72544 | WorkOrder: 1211500

**EPA Method: SM5520E/F** **Extraction: SM5520E/F** **Spiked Sample ID: 1211500-010A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/Kg | mg/Kg | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| POG | ND | 2000 | 91.9 | 90.1 | 2.01 | 92.9 | 70 - 130 | 30 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72544 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-004A | 11/16/12 10:30 AM | 11/16/12 | 11/21/12 5:15 PM | 1211500-007A | 11/16/12 10:00 AM | 11/16/12 | 11/21/12 5:20 PM |
| 1211500-010A | 11/16/12 11:00 AM | 11/16/12 | 11/21/12 5:25 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 72500 | WorkOrder: 1211500

**EPA Method: SW8260B** **Extraction: SW5030B** **Spiked Sample ID: 1211462-008A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/Kg | mg/Kg | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| tert-Amyl methyl ether (TAME) | ND | 0.050 | 79.6 | 70.8 | 11.1 | 80.4 | 56 - 94 | 30 | 70 - 130 |
| Benzene | ND | 0.050 | 82.6 | 78.5 | 4.99 | 87.5 | 60 - 106 | 30 | 70 - 130 |
| t-Butyl alcohol (TBA) | ND | 0.20 | 65.6 | 70.8 | 7.69 | 106 | 56 - 140 | 30 | 70 - 130 |
| Diisopropyl ether (DIPE) | ND | 0.050 | 86.5 | 81.8 | 5.51 | 91.6 | 53 - 111 | 30 | 70 - 130 |
| Ethyl tert-butyl ether (ETBE) | ND | 0.050 | 81.1 | 76.1 | 6.38 | 90.2 | 61 - 104 | 30 | 70 - 130 |
| Methyl-t-butyl ether (MTBE) | ND | 0.050 | 80.1 | 75.3 | 6.11 | 92.3 | 58 - 107 | 30 | 70 - 130 |
| Toluene | ND | 0.050 | 73.8 | 72.8 | 1.37 | 91.5 | 64 - 114 | 30 | 70 - 130 |
| %SS1: | 86 | 0.12 | 97 | 98 | 1.75 | 104 | 70 - 130 | 30 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72500 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-001A | 11/16/12 9:30 AM | 11/16/12 | 11/21/12 1:22 AM | 1211500-002A | 11/16/12 9:35 AM | 11/16/12 | 11/21/12 2:03 AM |
| 1211500-003A | 11/16/12 9:40 AM | 11/16/12 | 11/21/12 2:44 AM | 1211500-004A | 11/16/12 10:30 AM | 11/16/12 | 11/21/12 3:25 AM |
| 1211500-005A | 11/16/12 10:35 AM | 11/16/12 | 11/21/12 4:06 AM | 1211500-006A | 11/16/12 10:40 AM | 11/16/12 | 11/21/12 4:48 AM |
| 1211500-007A | 11/16/12 10:00 AM | 11/16/12 | 11/21/12 5:29 AM | 1211500-008A | 11/16/12 10:05 AM | 11/16/12 | 11/21/12 6:10 AM |
| 1211500-009A | 11/16/12 10:10 AM | 11/16/12 | 11/21/12 6:51 AM | 1211500-010A | 11/16/12 11:00 AM | 11/16/12 | 11/21/12 3:09 PM |
| 1211500-011A | 11/16/12 11:05 AM | 11/16/12 | 11/21/12 3:50 PM | 1211500-012A | 11/16/12 11:10 AM | 11/16/12 | 11/21/12 4:30 PM |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72587 | WorkOrder: 1211500

**EPA Method: SW8260B** **Extraction: SW5030B** **Spiked Sample ID: 1211500-015A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| tert-Amyl methyl ether (TAME) | ND | 10 | 94.4 | 104 | 9.10 | 89.3 | 70 - 130 | 20 | 70 - 130 |
| Benzene | ND | 10 | 97.2 | 97.3 | 0.161 | 87.7 | 70 - 130 | 20 | 70 - 130 |
| t-Butyl alcohol (TBA) | ND | 40 | 108 | 139, F1 | 25.5 | 91.7 | 70 - 130 | 20 | 70 - 130 |
| Diisopropyl ether (DIPE) | ND | 10 | 111 | 115 | 3.82 | 95.5 | 70 - 130 | 20 | 70 - 130 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 105 | 113 | 7.08 | 92.3 | 70 - 130 | 20 | 70 - 130 |
| Methyl-t-butyl ether (MTBE) | ND | 10 | 99.8 | 114 | 13.2 | 87.3 | 70 - 130 | 20 | 70 - 130 |
| Toluene | ND | 10 | 96.5 | 93.1 | 3.55 | 87.8 | 70 - 130 | 20 | 70 - 130 |
| %SS1: | 100 | 25 | 98 | 100 | 2.48 | 97 | 70 - 130 | 20 | 70 - 130 |
| %SS2: | 94 | 25 | 94 | 94 | 0 | 96 | 70 - 130 | 20 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

F1 = MS/MSD recovery was out of acceptance criteria; LCS validated the prep batch.

BATCH 72587 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-013A | 11/16/12 9:50 AM | 11/19/12 | 11/19/12 1:03 PM | 1211500-014A | 11/16/12 10:50 AM | 11/19/12 | 11/19/12 1:44 PM |
| 1211500-015A | 11/16/12 11:30 AM | 11/19/12 | 11/19/12 2:26 PM | 1211500-016A | 11/16/12 11:40 AM | 11/20/12 | 11/20/12 1:37 AM |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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# QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 72477 | WorkOrder: 1211500

**EPA Method: SW8015B** **Extraction: SW3550B** **Spiked Sample ID: 1211435-001A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/Kg | mg/Kg | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| TPH-Diesel (C10-C23) | 26 | 40 | 116 | 106 | 5.76 | 109 | 70 - 130 | 30 | 70 - 130 |
| %SS: | 97 | 25 | 75 | 88 | 16.2 | 89 | 70 - 130 | 30 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72477 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-001A | 11/16/12 9:30 AM | 11/16/12 | 11/18/12 8:34 AM | 1211500-004A | 11/16/12 10:30 AM | 11/16/12 | 11/26/12 4:01 PM |
| 1211500-010A | 11/16/12 11:00 AM | 11/16/12 | 11/17/12 8:27 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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

# QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil | QC Matrix: Soil | BatchID: 72509 | WorkOrder: 1211500

**EPA Method: SW8015B** **Extraction: SW3550B** **Spiked Sample ID: 1211470-001A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | mg/Kg | mg/Kg | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| TPH-Diesel (C10-C23) | 1.4 | 40 | 104 | 105 | 1.24 | 86.9 | 70 - 130 | 30 | 70 - 130 |
| %SS: | 106 | 25 | 94 | 94 | 0 | 77 | 70 - 130 | 30 | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72509 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-007A | 11/16/12 10:00 AM | 11/16/12 | 11/20/12 10:01 PM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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# QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 72439 | WorkOrder: 1211500

**EPA Method: SW8015B** **Extraction: SW3510C** **Spiked Sample ID: N/A**

| Analyte | Sample | Spiked | MS | MSD | MS-MSD | LCS | Acceptance Criteria (%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | MS / MSD | RPD | LCS |
| TPH-Diesel (C10-C23) | N/A | 1000 | N/A | N/A | N/A | 120 | N/A | N/A | 70 - 130 |
| %SS: | N/A | 625 | N/A | N/A | N/A | 94 | N/A | N/A | 70 - 130 |

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 72439 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1211500-013B | 11/16/12 9:50 AM | 11/16/12 | 11/18/12 7:23 AM | | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

ALAMEDA COUNTY
**HEALTH CARE SERVICES**
AGENCY
ALEX BRISCOE, Director

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

September 27, 2012

Mr. Phillip Smith (sent via electronic mail to pjboise@aol.com)
PJ Smith Family LLC
PO Box 1542
Boise, ID 83701-1542

Subject: Conditional Work Plan Approval; Fuel Leak Case No. RO0003065 and GeoTracker Global ID T0600102132, Smith Commercial Property, 2520 Blanding Avenue, Alameda, CA 94501

Dear Mr. Smith:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file, including the *Soil and Groundwater Investigation Work Plan* (Work Plan) and the *Supplemental Groundwater Investigation Report Addendum* (Addendum), both dated July 24, 2012. These reports were prepared and submitted on your behalf by Pacific Engineering and Construction, Inc. (PECI). Thank you for submitting the reports to ACEH, claiming the site and uploading the reports to Geotracker. The Work Plan proposes the installation of four soil borings, in the four compass directions within or very close to the tank pit area to define the lateral extent of total petroleum hydrocarbons (TPH). The Addendum adequately addresses data deficiencies ACEH noted in the November 25, 2009 *Limited Soil and Groundwater Investigation* and the September 26, 2011 *Supplemental Groundwater Investigation Report*.

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 field investigation. 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 technical comments below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to: karel.detterman@acgov.org) prior to the start of field activities.

## TECHNICAL COMMENTS

1. **Clarification of Soil Boring Locations and Soil Sample Collection Criteria –**

   a. **Soil Boring Locations** The Work Plan states that the soil boring placed along the eastern property line may be hand augured to get as close as possible to the property line, however in order to obtain the best and most comparable quality data, ACEH recommends using the direct push drill rig instead.

   b. **Soil Sample Collection –** The Work Plan states that samples will be selected that will provide a vertical characterization of the contaminants of concern, but no criteria is provided. Since the goal of this investigation is to determine the lateral, down gradient, and vertical extent of total petroleum hydrocarbon (TPH) contamination in soil and groundwater beneath the site, ACEH recommends that soil samples should be collected and analyzed at intervals

of five feet, areas of obvious contamination, the soil/groundwater interface, and at significant changes in lithology. If staining, odor, or elevated PID readings are observed over an interval of several feet, a sufficient number of soil samples from this interval should be submitted for laboratory analyses to characterize the fuel hydrocarbon concentrations within this interval. Please ensure that the analytical results define the vertical and horizontal extent of TPH impacts at the site.

c. **Soil and Groundwater Analyses** - Please analyze all selected soil and groundwater samples by Method 8260 for TPH-Gasoline, benzene, toluene, ethyl benzene, and xylenes (BTEX), ethylene dibromide (EDB), ethylene dichloride (EDC), Methyl Tertiary-Butyl Ether (MTBE), Tert-amyl-methyl ether (TAME), Ethyl tert-butyl ether (ETBE), Di-isopropyl ether (DIPE), and t-Butyl alcohol (TBA).

2. **East Bay Plain Groundwater Basin** - Please note that at the present all groundwater in the City of Alameda which is located in the East Bay Plain Groundwater Basin is classified as 'MUN' (potentially suitable for municipal or domestic water supply). According to the San Francisco Regional Water Quality Control Board (SFRWQCB) Water Quality Control Plan (Basin Plan), dated January 18, 2007, for the San Francisco Bay Basin, "the term 'groundwater' includes all subsurface waters, whether or not these waters meet the classic definition of an aquifer or occurs within identified groundwater basins.' The Basin Plan also states that 'all groundwaters are considered suitable, or potentially suitable, for municipal or domestic water supply (MUN)." Therefore, the groundwater beneath the subject site must be considered beneficial for these uses unless shown to be non-beneficial using criteria presented in the Basin Plan.

3. **Geo Tracker Compliance** – Please continue to upload your reports to Geotracker so as to stay current.

## TECHNICAL REPORT REQUEST

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

- **November 30, 2012** – Soil and Groundwater Investigation Report
  File to be named: SWI_R_yyyy-mm-dd_RO3065

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.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please send me an e-mail message at karel.detterman@acgov.org or call me at (510) 567-6708.

Sincerely,

Ejhjubmmdltjhof e!cz!Lbsf nfEf uf sn bo!
EO;!do>Lbsf nfEf uf sn bo-!p-!pv-!
f n bjm=l bsf nef uf sn boAbdhpwpsh-!
d>VT!
Ebuf ;!3123/1: /38!27;14;49!.18(11(

Karel Detterman, PG
Hazardous Materials Specialist

Enclosures: Responsible Party(ies) Legal Requirements/Obligations
ACEH Electronic Report Upload (ftp) Instructions

cc: Mark Waldman, Pacific Engineering and Construction, Inc., 35 Stillman Street, Ste. 126, San Francisco, CA 94107 (Sent via E-mail to:amwaldman@sbcglobal.net)

Miles Grant, Pacific Engineering and Construction, Inc., 35 Stillman Street, Ste. 126, San Francisco, CA 94107 (Sent via E-mail to: milesg2000@hotmail.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Karel Detterman, ACEH (Sent via E-mail to: karel.detterman@acgov.org)
GeoTracker, Electronic Case File